

Sequence Listing

- <110> Ashkenazi, Avi J.
 Baker, Kevin P.
 Botstein, David
 Desnoyers, Luc
 Eaton, Dan L.
 Ferrara, Napoleone
 Fong, Sherman
 Gerber, Hanspeter
 Gerritsen, Mary E.
 Goddard, Audrey
 Godowski, Paul J.
 Grimaldi, J. Christopher
 Gurney, Austin L.
 Kljavin, Ivar J.
 Napier, Mary A.
 Pan, James
 Paoni, Nicholas F.
 Roy, Margaret Ann
 Stewart, Timothy A.
 Tumas, Daniel
 Watanabe, Colin K.
 Williams, P. Mickey
 Wood, William I.
 Zhang, Zemin
- <120> Secreted and Transmembrane Polypeptides and Nucleic
 Acids Encoding the Same
- <130> P2730P1C68
- <150> 60/049787
 <151> 1997-06-16
- <150> 60/062250
 <151> 1997-10-17
- <150> 60/065186
 <151> 1997-11-12
- <150> 60/065311
 <151> 1997-11-13
- <150> 60/066770
 <151> 1997-11-24
- <150> 60/075945
 <151> 1998-02-25
- <150> 60/078910
 <151> 1998-03-20
- <150> 60/083322
 <151> 1998-04-28
- <150> 60/084600
 <151> 1998-05-07
- <150> 60/087106
 <151> 1998-05-28
- <150> 60/087607

09997 EE68660

<151> 1998-06-02
<150> 60/087609
<151> 1998-06-02

<150> 60/087759
<151> 1998-06-02

<150> 60/087827
<151> 1998-06-03

<150> 60/088021
<151> 1998-06-04

<150> 60/088025
<151> 1998-06-04

<150> 60/088026
<151> 1998-06-04

<150> 60/088028
<151> 1998-06-04

<150> 60/088029
<151> 1998-06-04

<150> 60/088030
<151> 1998-06-04

<150> 60/088033
<151> 1998-06-04

<150> 60/088326
<151> 1998-06-04

<150> 60/088167
<151> 1998-06-05

<150> 60/088202
<151> 1998-06-05

<150> 60/088212
<151> 1998-06-05

<150> 60/088217
<151> 1998-06-05

<150> 60/088655
<151> 1998-06-09

<150> 60/088734
<151> 1998-06-10

<150> 60/088738
<151> 1998-06-10

<150> 60/088742
<151> 1998-06-10

<150> 60/088810
<151> 1998-06-10

<150> 60/088824

<151> 1998-06-10
 <150> 60/088826
 <151> 1998-06-10
 <150> 60/088858
 <151> 1998-06-11
 <150> 60/088861
 <151> 1998-06-11
 <150> 60/088876
 <151> 1998-06-11
 <150> 60/089105
 <151> 1998-06-12
 <150> 60/089440
 <151> 1998-06-16
 <150> 60/089512
 <151> 1998-06-16
 <150> 60/089514
 <151> 1998-06-16
 <150> 60/089532
 <151> 1998-06-17
 <150> 60/089538
 <151> 1998-06-17
 <150> 60/089598
 <151> 1998-06-17
 <150> 60/089599
 <151> 1998-06-17
 <150> 60/089600
 <151> 1998-06-17
 <150> 60/089653
 <151> 1998-06-17
 <150> 60/089801
 <151> 1998-06-18
 <150> 60/089907
 <151> 1998-06-18
 <150> 60/089908
 <151> 1998-06-18
 <150> 60/089947
 <151> 1998-06-19
 <150> 60/089948
 <151> 1998-06-19
 <150> 60/089952
 <151> 1998-06-19
 <150> 60/090246

090931001 EEZ68660

<151> 1998-06-22
<150> 60/090252
<151> 1998-06-22

<150> 60/090254
<151> 1998-06-22

<150> 60/090349
<151> 1998-06-23

<150> 60/090355
<151> 1998-06-23

<150> 60/090429
<151> 1998-06-24

<150> 60/090431
<151> 1998-06-24

<150> 60/090435
<151> 1998-06-24

<150> 60/090444
<151> 1998-06-24

<150> 60/090445
<151> 1998-06-24

<150> 60/090472
<151> 1998-06-24

<150> 60/090535
<151> 1998-06-24

<150> 60/090540
<151> 1998-06-24

<150> 60/090542
<151> 1998-06-24

<150> 60/090557
<151> 1998-06-24

<150> 60/090676
<151> 1998-06-25

<150> 60/090678
<151> 1998-06-25

<150> 60/090690
<151> 1998-06-25

<150> 60/090694
<151> 1998-06-25

<150> 60/090695
<151> 1998-06-25

<150> 60/090696
<151> 1998-06-25

<150> 60/090862

<151> 1998-06-26
 <150> 60/090863
 <151> 1998-06-26
 <150> 60/091360
 <151> 1998-07-01
 <150> 60/091478
 <151> 1998-07-02
 <150> 60/091544
 <151> 1998-07-01
 <150> 60/091519
 <151> 1998-07-02
 <150> 60/091626
 <151> 1998-07-02
 <150> 60/091633
 <151> 1998-07-02
 <150> 60/091978
 <151> 1998-07-07
 <150> 60/091982
 <151> 1998-07-07
 <150> 60/092182
 <151> 1998-07-09
 <150> 60/092472
 <151> 1998-07-10
 <150> 60/091628
 <151> 1998-07-02
 <150> 60/091646
 <151> 1998-07-02
 <150> 60/091673
 <151> 1998-07-02
 <150> 60/093339
 <151> 1998-07-20
 <150> 60/094651
 <151> 1998-07-30
 <150> 60/095282
 <151> 1998-08-04
 <150> 60/095285
 <151> 1998-08-04
 <150> 60/095302
 <151> 1998-08-04
 <150> 60/095318
 <151> 1998-08-04
 <150> 60/095321

<151> 1998-08-18
 <150> 60/096960
 <151> 1998-08-18
 <150> 60/097022
 <151> 1998-08-18
 <150> 60/097141
 <151> 1998-08-19
 <150> 60/097218
 <151> 1998-08-20
 <150> 60/097661
 <151> 1998-08-24
 <150> 60/097952
 <151> 1998-08-26
 <150> 60/097954
 <151> 1998-08-26
 <150> 60/097955
 <151> 1998-08-26
 <150> 60/098014
 <151> 1998-08-26
 <150> 60/097971
 <151> 1998-08-26
 <150> 60/097974
 <151> 1998-08-26
 <150> 60/097978
 <151> 1998-08-26
 <150> 60/097986
 <151> 1998-08-26
 <150> 60/097979
 <151> 1998-08-26
 <150> 60/098525
 <151> 1998-08-31
 <150> 60/100634
 <151> 1998-09-16
 <150> 60/100858
 <151> 1998-09-17
 <150> 60/113296
 <151> 1998-12-22
 <150> 60/123957
 <151> 1999-03-12
 <150> 60/141037
 <151> 1999-06-23
 <150> 60/143048

<151> 1999-07-07
 <150> 60/144758
 <151> 1999-07-20
 <150> 60/145698
 <151> 1999-07-26
 <150> 60/146222
 <151> 1999-07-28
 <150> 60/149396
 <151> 1999-08-17
 <150> 60/158663
 <151> 1999-10-08
 <150> 60/213637
 <151> 2000-06-23
 <150> 60/230978
 <151> 2000-09-07
 <150> 08/743698
 <151> 1996-11-06
 <150> 08/876698
 <151> 1997-06-16
 <150> 08/965056
 <151> 1997-11-05
 <150> 09/105413
 <151> 1998-06-26
 <150> 09/168978
 <151> 1998-10-07
 <150> 09/187368
 <151> 1998-11-06
 <150> 09/202054
 <151> 1998-12-07
 <150> 09/218517
 <151> 1998-12-22
 <150> 09/254311
 <151> 1999-03-03
 <150> 09/254460
 <151> 1999-03-09
 <150> 09/267213
 <151> 1999-03-12
 <150> 09/284291
 <151> 1999-04-12
 <150> 09/380137
 <151> 1999-08-25
 <150> 09/380138

<151> 1999-06-02
 <150> PCT/US99/21090
 <151> 1999-09-15
 <150> PCT/US99/21547
 <151> 1999-09-15
 <150> PCT/US99/28313
 <151> 1999-11-30
 <150> PCT/US99/28301
 <151> 1999-12-01
 <150> PCT/US99/28634
 <151> 1999-12-01
 <150> PCT/US99/30095
 <151> 1999-12-16
 <150> PCT/US99/30911
 <151> 1999-12-20
 <150> PCT/US00/00219
 <151> 2000-01-05
 <150> PCT/US00/00376
 <151> 2000-01-06
 <150> PCT/US00/03565
 <151> 2000-02-11
 <150> PCT/US00/04341
 <151> 2000-02-18
 <150> PCT/US00/04414
 <151> 2000-02-22
 <150> PCT/US00/04914
 <151> 2000-02-24
 <150> PCT/US00/05004
 <151> 2000-02-24
 <150> PCT/US00/05841
 <151> 2000-03-02
 <150> PCT/US00/06319
 <151> 2000-03-10
 <150> PCT/US00/06884
 <151> 2000-03-15
 <150> PCT/US00/07377
 <151> 2000-03-20
 <150> PCT/US00/08439
 <151> 2000-03-30
 <150> PCT/US00/13358
 <151> 2000-05-15
 <150> PCT/US00/13705

<151> 2000-05-17

<150> PCT/US00/14042

<151> 2000-05-22

<150> PCT/US00/14941

<151> 2000-05-30

<150> PCT/US00/15264

<151> 2000-06-02

<150> PCT/US00/20710

<151> 2000-07-28

<150> PCT/US00/22031

<151> 2000-08-11

<150> PCT/US00/23522

<151> 2000-08-23

<150> PCT/US00/23328

<151> 2000-08-24

<150> PCT/US00/30952

<151> 2000-11-08

<150> PCT/US00/32678

<151> 2000-12-01

<150> PCT/US01/06520

<151> 2001-02-28

<150> PCT/US01/17800

<151> 2001-06-01

<150> PCT/US01/19692

<151> 2001-06-20

<150> PCT/US01/21066

<151> 2001-06-29

<150> PCT/US01/21735

<151> 2001-07-09

<160> 532

<210> 1

<211> 1943

<212> DNA

<213> Homo sapiens

<400> 1

cggacgcgtg ggtgcgagggc gaaggtgacc ggggaccgag catttcagat 50
ctgctcggta gacctgggtgc accaccacca tggttggtgc aaggctggtg 100
tgtctccgga cactaccttc tagggttttc caccagctt tcaccaaggc 150
ctcccctggt gtgaagaatt ccatcacgaa gaatcaatgg ctgttaacac 200
ctagcagggga atatgccacc aaaacaagaa ttgggatccg gcgtagggaga 250
actggccaag aactcaaaga ggcagcattg gaaccatcga tggaaaaaat 300

atttaaaatt gatcagatgg gaagatgggt tgttgctgga ggggctgctg 350
 ttggtcttgg agcattgtgc tactatggct tgggactgtc taatgagatt 400
 ggagctattg aaaaggctgt aatttggcct cagtatgtca aggatagaat 450
 tcattccacc tatatgtact tagcagggag tattgggttta acagctttgt 500
 ctgccatagc aatcagcaga acgcctgttc tcatgaactt catgatgaga 550
 ggctcttggg tgacaattgg tgtgaacctt gcagccatgg ttggagctgg 600
 aatgctggta cgatcaatac catatgacca gagcccaggc ccaaagcatc 650
 ttgcttgggt gctacattct ggtgtgatgg gtgcagtggg ggctcctctg 700
 acaatattag ggggtcctct tctcatcaga gctgcatggg acacagctgg 750
 cattgtggga ggctctcca ctgtggccat gtgtgcgccc agtgaaaagt 800
 ttctgaacat ggggtgcacc ctgggagtgg gcctgggtct cgtctttgtg 850
 tctcattgg gatctatgtt tcttcacct accaccgtgg ctggtgccac 900
 tctttactca gtggcaatgt acggtggatt agttcttttc agcatgttcc 950
 ttctgtatga taccagaaa gtaatcaagc gtgcagaagt atcaccaatg 1000
 tatggagtgc aaaaatatga tccattaac tcatgctga gtatctacat 1050
 ggatacatta aatatattta tgcgagtgc aactatgctg gcaactggag 1100
 gcaacagaaa gaaatgaagt gactcagctt ctggcttctc tgctacatca 1150
 aatatcttgt ttaatggggc agatatgcat taaatagttt gtacaagcag 1200
 ctttcgttga agtttagaag ataagaaaca tgtcatcata tttaaatgtt 1250
 ccggtaatgt gatgcctcag gtctgccttt ttttctggag aataaatgca 1300
 gtaatcctct cccaaataag cacacacatt ttcaattctc atgtttgagt 1350
 gattttaaaa tgttttgggt aatgtgaaaa ctaaagtttg tgtcatgaga 1400
 atgtaagtct tttttctact ttaaaattta gtaggttcac tgagtaacta 1450
 aaatttagca aacctgtgtt tgcataattt tttggagtgc agaattattg 1500
 aattaatgtc ataagtgatt tggagctttg gtaaagggac cagagagaag 1550
 gagtcacctg cagtcttttg tttttttaa tacttagaac ttagcacttg 1600
 tgttattgat tagtgaggag ccagtaagaa acatctgggt atttggaaac 1650
 aagtggatcat tgttacattc atttgctgaa ctttaacaaa ctgttcatcc 1700
 tgaaacaggc acaggtgatg cattctcctg ctgttgcttc tcagtgtctt 1750
 ctttccaata tagatgtggg catgtttgac ttgtacagaa tgttaatcat 1800
 acagagaatc cttgatggaa ttatatatgt gtgttttact tttgaatgtt 1850
 acaaaaggaa ataactttta aactattctc aagagaaaat attcaaagca 1900

tgaaatatgt tgctttttcc agaatacaaa cagtatactc atg 1943

<210> 2

<211> 345

<212> PRT

<213> Homo sapiens

<400> 2

Met	Leu	Ala	Ala	Arg	Leu	Val	Cys	Leu	Arg	Thr	Leu	Pro	Ser	Arg	1	5	10	15
Val	Phe	His	Pro	Ala	Phe	Thr	Lys	Ala	Ser	Pro	Val	Val	Lys	Asn	20	25	30	
Ser	Ile	Thr	Lys	Asn	Gln	Trp	Leu	Leu	Thr	Pro	Ser	Arg	Glu	Tyr	35	40	45	
Ala	Thr	Lys	Thr	Arg	Ile	Gly	Ile	Arg	Arg	Gly	Arg	Thr	Gly	Gln	50	55	60	
Glu	Leu	Lys	Glu	Ala	Ala	Leu	Glu	Pro	Ser	Met	Glu	Lys	Ile	Phe	65	70	75	
Lys	Ile	Asp	Gln	Met	Gly	Arg	Trp	Phe	Val	Ala	Gly	Gly	Ala	Ala	80	85	90	
Val	Gly	Leu	Gly	Ala	Leu	Cys	Tyr	Tyr	Gly	Leu	Gly	Leu	Ser	Asn	95	100	105	
Glu	Ile	Gly	Ala	Ile	Glu	Lys	Ala	Val	Ile	Trp	Pro	Gln	Tyr	Val	110	115	120	
Lys	Asp	Arg	Ile	His	Ser	Thr	Tyr	Met	Tyr	Leu	Ala	Gly	Ser	Ile	125	130	135	
Gly	Leu	Thr	Ala	Leu	Ser	Ala	Ile	Ala	Ile	Ser	Arg	Thr	Pro	Val	140	145	150	
Leu	Met	Asn	Phe	Met	Met	Arg	Gly	Ser	Trp	Val	Thr	Ile	Gly	Val	155	160	165	
Thr	Phe	Ala	Ala	Met	Val	Gly	Ala	Gly	Met	Leu	Val	Arg	Ser	Ile	170	175	180	
Pro	Tyr	Asp	Gln	Ser	Pro	Gly	Pro	Lys	His	Leu	Ala	Trp	Leu	Leu	185	190	195	
His	Ser	Gly	Val	Met	Gly	Ala	Val	Val	Ala	Pro	Leu	Thr	Ile	Leu	200	205	210	
Gly	Gly	Pro	Leu	Leu	Ile	Arg	Ala	Ala	Trp	Tyr	Thr	Ala	Gly	Ile	215	220	225	
Val	Gly	Gly	Leu	Ser	Thr	Val	Ala	Met	Cys	Ala	Pro	Ser	Glu	Lys	230	235	240	
Phe	Leu	Asn	Met	Gly	Ala	Pro	Leu	Gly	Val	Gly	Leu	Gly	Leu	Val	245	250	255	
Phe	Val	Ser	Ser	Leu	Gly	Ser	Met	Phe	Leu	Pro	Pro	Thr	Thr	Val	260	265	270	
Ala	Gly	Ala	Thr	Leu	Tyr	Ser	Val	Ala	Met	Tyr	Gly	Gly	Leu	Val				

	275		280		285
Leu Phe Ser Met	Phe Leu Leu Tyr Asp	Thr Gln Lys Val Ile	Lys		
	290	295	300		
Arg Ala Glu Val	Ser Pro Met Tyr Gly	Val Gln Lys Tyr Asp	Pro		
	305	310	315		
Ile Asn Ser Met	Leu Ser Ile Tyr Met	Asp Thr Leu Asn Ile	Phe		
	320	325	330		
Met Arg Val Ala	Thr Met Leu Ala Thr	Gly Gly Asn Arg Lys	Lys		
	335	340	345		

<210> 3
 <211> 43
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 3
 tgtaaaacga cggccagtta aatagacctg caattattaa tct 43

<210> 4
 <211> 41
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 4
 caggaaacag ctatgaccac ctgcacacct gcaaattccat t 41

<210> 5
 <211> 3033
 <212> DNA
 <213> Homo sapiens

<400> 5
 gaaggctgcc tcgctggtcc gaattcgggtg gcgccacgtc cgcccgtctc 50
 cgccttctgc atcgcggctt cggcggcttc cacctagaca cctaacagtc 100
 gcggagccgg ccgcgtcgtg agggggtcgg cacggggagt cgggcggtct 150
 tgtgcatctt ggctacctgt gggtcgaaga tgtcggacat cggagactgg 200
 ttcaggagca tcccggcgat cacgcgctat tggttcgccg ccaccgtcgc 250
 cgtgcccttg gtcggcaaac tcggcctcat cagcccggcc tacctcttcc 300
 tctggcccga agccttcctt tatcgctttc agatttgagg gccaatcact 350
 gccacctttt atttcctgt gggtcaggga actggatttc tttatttggg 400
 caatttatat ttcttatatc agtattctac gcgacttgaa acaggagctt 450
 ttgatgggag gccagcagac tatttattca tgctcctctt taactggatt 500
 tgcacgtga ttactggctt agcaatggat atgcagttgc tgatgattcc 550

tctgatcatg tcagtacttt atgtctgggc ccagctgaac agagacatga 600
 ttgtatcatt ttggtttgga acacgattta aggcctgcta tttaccctgg 650
 gttatccttg gattcaacta tatcatcgga ggctcggtta tcaatgagct 700
 tattggaaat ctggttgga atctttatatt tttcctaattg ttcagatacc 750
 caatggactt gggaggaaga aattttctat ccacacctca gttttgtac 800
 cgctggctgc ccagtaggag aggaggagta tcaggatttg gtgtgcccc 850
 tgctagcatg aggcgagctg ctgatcagaa tggcggaggc gggagacaca 900
 actggggcca gggctttcga cttggagacc agtgaagggg cggcctcggg 950
 cagccgctcc tctcaagcca catttctcc cagtgtctggg tgcacttaac 1000
 aactgcgttc tggctaacac tgttggaact gaccacact gaatgtagtc 1050
 tttcagtaag agacaaagt tcttaaattcc cgaagaaaaa tataagtgtt 1100
 ccacaagttt cagcattctc attcaagtcc ttactgctgt gaagaacaaa 1150
 taccaactgt gcaaattgca aaactgacta catttttttg tgtcttctct 1200
 tctccccttt ccgtctgaat aatgggtttt agcgggtcct aatctgtctg 1250
 cattgagctg gggctgggtc accaaacct tccaaaagg accttatctc 1300
 tttcttgca acatgcctct ctccacttt tcccaacccc cacatttgca 1350
 actagaaaaa gttgccata aaattgctct gcccttgaca ggttctgtta 1400
 tttattgact tttgccaagg ctggtcacaa caatcatatt caggttattt 1450
 tccccttttg gtggcagaac tgttaccaat agggggagaa gacagccacg 1500
 gatgaagcgt ttctcagctt ttggaattgc ttcgactgac atccgttggt 1550
 aacggtttgc cactcttcag atatttttta taaaaaaagt accactgagt 1600
 tcatgagggc cacagatttg ttattaatga gatacgaggg ttggtgctgg 1650
 gtgtttgttt cctgagctaa gtgatcaaga ctgtagtgga gttgcagcta 1700
 acatgggtta gggttaaacc atgggggatg caccctttg cgtttcatat 1750
 gtagccctac tggctttgtg tagctggagt agttgggttg ctttgtgtta 1800
 ggaggatcca gatcatgttg gctacagga gatgctctct ttgagaggtc 1850
 ctgggcattg attccattt caatctcatt ctggatatgt gttcattgag 1900
 taaaggagga gagacctca tacgctattt aaatgtcact ttttgccta 1950
 tccccggtt tttggtcatg tttcaattaa ttgtgaggaa ggcgcagctc 2000
 ctctctgcac gtagatcatt ttttaaagct aatgtaagca catctaaggg 2050
 aataacatga ttttaagggtt aaatggcttt agaactcattt gggtttgagg 2100
 gtgtgttatt ttgagtcag aatgtacaag ctctgtgaat cagaccagct 2150

Trp	Ile	Cys	Ile	Val	Ile	Thr	Gly	Leu	Ala	Met	Asp	Met	Gln	Leu
				110					115					120
Leu	Met	Ile	Pro	Leu	Ile	Met	Ser	Val	Leu	Tyr	Val	Trp	Ala	Gln
				125					130					135
Leu	Asn	Arg	Asp	Met	Ile	Val	Ser	Phe	Trp	Phe	Gly	Thr	Arg	Phe
				140					145					150
Lys	Ala	Cys	Tyr	Leu	Pro	Trp	Val	Ile	Leu	Gly	Phe	Asn	Tyr	Ile
				155					160					165
Ile	Gly	Gly	Ser	Val	Ile	Asn	Glu	Leu	Ile	Gly	Asn	Leu	Val	Gly
				170					175					180
His	Leu	Tyr	Phe	Phe	Leu	Met	Phe	Arg	Tyr	Pro	Met	Asp	Leu	Gly
				185					190					195
Gly	Arg	Asn	Phe	Leu	Ser	Thr	Pro	Gln	Phe	Leu	Tyr	Arg	Trp	Leu
				200					205					210
Pro	Ser	Arg	Arg	Gly	Gly	Val	Ser	Gly	Phe	Gly	Val	Pro	Pro	Ala
				215					220					225
Ser	Met	Arg	Arg	Ala	Ala	Asp	Gln	Asn	Gly	Gly	Gly	Gly	Arg	His
				230					235					240
Asn	Trp	Gly	Gln	Gly	Phe	Arg	Leu	Gly	Asp	Gln				
				245					250					

<210> 7
 <211> 1373
 <212> DNA
 <213> Homo sapiens

<400> 7
 ggggccgcgg tctagggcgg ctacgtgtgt tgccatagcg accattttgc 50
 attaactggg tggtagcttc tatcctgggg gctgagcgac tgcgggccag 100
 ctcttcccc actccctctc ggctccttgt ggcccaaagg cctaaccggg 150
 gtccggcggt ctggcctagg gatcttcccc gttgcccctt tggggcgga 200
 tggctgcgga agaagaagac gaggtggagt gggtagtgga gagcatcgcg 250
 gggttcctgc gaggccaga ctggtccatc cccatcttgg actttgtgga 300
 acagaaatgt gaagttaact gcaaaggagg gcatgtgata actccaggaa 350
 gccagagcc ggtgattttg gtggcctgtg ttccccttgt ttttgatgat 400
 gaagaagaaa gcaaattgac ctatacagag attcatcagg aatacaaaga 450
 actagttgaa aagctgttag aaggttacct caaagaaatt ggaattaatg 500
 aagatcaatt tcaagaagca tgcacttctc ctcttgcaaa gaccataca 550
 tcacaggcca ttttgcaacc tgtgttgga gcagaagatt ttactatctt 600
 taaagcaatg atggtccaga aaaacattga aatgcagctg caagccattc 650
 gaataattca agagagaaat ggtgtattac ctgactgctt aaccgatggc 700

tctgatgtgg tcagtgcacct tgaacacgaa gagatgaaaa tcctgagggg 750
 agttcttaga aaatcaaaag aggaatatga ccaggaagaa gaaaggaaga 800
 ggaaaaaaca gttatcagag gctaaaacag aagagcccac agtgcattcc 850
 agtgaagctg caataatgaa taattcccaa ggggatgggtg aacattttgc 900
 acacccaccc tcagaagtta aaatgcattt tgctaatacag tcaatagaac 950
 ctttggggaag aaaagtggaa aggtctgaaa cttcctccct cccacaaaaa 1000
 ggcctgaaga ttcttggtt agagcatgag agcattgaag gaccaatagc 1050
 aaacttatca gtacttgga cagaagaact tcggcaacga gaacactatc 1100
 tcaagcagaa gagagataag ttgatgtcca tgagaaagga tatgaggact 1150
 aaacagatac aaaatatgga gcagaaagga aaacccactg gggaggtaga 1200
 ggaaatgaca gagaaaccag aaatgacagc agaggagaag caaacattac 1250
 taaagaggag attgcttgca gagaaactca aagaagaagt tattaataag 1300
 taataattaa gaacaattta acaaaatgga agttcaaatt gtcttaaaaa 1350
 taaattattt agtccttaca ctg 1373

<210> 8
 <211> 367
 <212> PRT
 <213> Homo sapiens

<400> 8
 Met Ala Ala Glu Glu Glu Asp Glu Val Glu Trp Val Val Glu Ser
 1 5 10 15
 Ile Ala Gly Phe Leu Arg Gly Pro Asp Trp Ser Ile Pro Ile Leu
 20 25 30
 Asp Phe Val Glu Gln Lys Cys Glu Val Asn Cys Lys Gly Gly His
 35 40 45
 Val Ile Thr Pro Gly Ser Pro Glu Pro Val Ile Leu Val Ala Cys
 50 55 60
 Val Pro Leu Val Phe Asp Asp Glu Glu Glu Ser Lys Leu Thr Tyr
 65 70 75
 Thr Glu Ile His Gln Glu Tyr Lys Glu Leu Val Glu Lys Leu Leu
 80 85 90
 Glu Gly Tyr Leu Lys Glu Ile Gly Ile Asn Glu Asp Gln Phe Gln
 95 100 105
 Glu Ala Cys Thr Ser Pro Leu Ala Lys Thr His Thr Ser Gln Ala
 110 115 120
 Ile Leu Gln Pro Val Leu Ala Ala Glu Asp Phe Thr Ile Phe Lys
 125 130 135
 Ala Met Met Val Gln Lys Asn Ile Glu Met Gln Leu Gln Ala Ile
 140 145 150

Arg	Ile	Ile	Gln	Glu	Arg	Asn	Gly	Val	Leu	Pro	Asp	Cys	Leu	Thr	
				155					160					165	
Asp	Gly	Ser	Asp	Val	Val	Ser	Asp	Leu	Glu	His	Glu	Glu	Met	Lys	
				170					175					180	
Ile	Leu	Arg	Glu	Val	Leu	Arg	Lys	Ser	Lys	Glu	Glu	Tyr	Asp	Gln	
				185					190					195	
Glu	Glu	Glu	Arg	Lys	Arg	Lys	Lys	Gln	Leu	Ser	Glu	Ala	Lys	Thr	
				200					205					210	
Glu	Glu	Pro	Thr	Val	His	Ser	Ser	Glu	Ala	Ala	Ile	Met	Asn	Asn	
				215					220					225	
Ser	Gln	Gly	Asp	Gly	Glu	His	Phe	Ala	His	Pro	Pro	Ser	Glu	Val	
				230					235					240	
Lys	Met	His	Phe	Ala	Asn	Gln	Ser	Ile	Glu	Pro	Leu	Gly	Arg	Lys	
				245					250					255	
Val	Glu	Arg	Ser	Glu	Thr	Ser	Ser	Leu	Pro	Gln	Lys	Gly	Leu	Lys	
				260					265					270	
Ile	Pro	Gly	Leu	Glu	His	Ala	Ser	Ile	Glu	Gly	Pro	Ile	Ala	Asn	
				275					280					285	
Leu	Ser	Val	Leu	Gly	Thr	Glu	Glu	Leu	Arg	Gln	Arg	Glu	His	Tyr	
				290					295					300	
Leu	Lys	Gln	Lys	Arg	Asp	Lys	Leu	Met	Ser	Met	Arg	Lys	Asp	Met	
				305					310					315	
Arg	Thr	Lys	Gln	Ile	Gln	Asn	Met	Glu	Gln	Lys	Gly	Lys	Pro	Thr	
				320					325					330	
Gly	Glu	Val	Glu	Glu	Met	Thr	Glu	Lys	Pro	Glu	Met	Thr	Ala	Glu	
				335					340					345	
Glu	Lys	Gln	Thr	Leu	Leu	Lys	Arg	Arg	Leu	Leu	Ala	Glu	Lys	Leu	
				350					355					360	
Lys	Glu	Glu	Val	Ile	Asn	Lys									
				365											

<210> 9
 <211> 418
 <212> DNA
 <213> Homo sapiens

<400> 9
 gggcacagca catgtgaagt ttttgatgat gaagaagaaa gcaaattgac 50
 ctatacagag attcatcagg aatacaaaga actagttgaa aagctgtag 100
 aaggttacct caaagaaatt ggaattaatg aagatcaatt tcaagaagca 150
 tgcacttctc ctcttgcaaa gaccataca tcacaggcca tttttgcaac 200
 ctgtgttggc agcagaagat ttactatct ttaaagcaat gatggtccag 250
 aaaaacattg aaatgcagct gcaagccatt cgaataattc aagagagaaa 300

tgggtgtatta cctgactgct taaccgatgg ctctgatgtg gtcagtgacc 350
 ttgaacacga agagatgaaa atcctgaggg aagttcttag aaaatcaaaa 400
 gaggaatatg accaggaa 418

<210> 10
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 10
 ttgacctata cagagattca tc 22

<210> 11
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 11
 ctaagaactt ccctcaggat ttt 23

<210> 12
 <211> 40
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 12
 atgaagatca atttcaagaa gcatgcactt ctctctttgc 40

<210> 13
 <211> 2886
 <212> DNA
 <213> Homo sapiens

<400> 13
 gcgtgggtttt tggtctgcaa taggcggctt agaggaggagg gctttttcgc 50
 ctatacctac tgtagcttct ccacgtatgg accctaaagg ctactgctgc 100
 tactacgggg ctagacagtt actgtctcag ctctaggatg tgcgttcttc 150
 cactagaagc tcttctgagg gaggtaatta aaaaacagtg gaatggaaaa 200
 acagtgctgt agtcatcctg taatatgctc cttgtcaaca atgtatacat 250
 tcctgctagg tgccatattc attgctttaa gctcaagtcg catcttacta 300
 gtgaagtatt ctgccaatga agaaaacaag tatgattatc ttccaactac 350
 tgtgaatgtg tgctcagaac tgggtgaagct agttttctgt gtgcttgtgt 400
 cattctgtgt tataaagaaa gatcatcaaa gtagaaattt gaaatatgct 450

tcctggaag aattctctga ttcatgaag tggccattc ctgcctttct 500
 ttatttcctg gataacttga ttgtcttcta tgcctgtcc tatcttcaac 550
 cagccatggc tgttatcttc tcaaatTTta gcattataac aacagctctt 600
 ctattcagga tagtgctgaa gaggcgtcta aactggatcc agtgggcttc 650
 cctcctgact ttatttttgt ctattgtggc cttgactgcc gggactaaaa 700
 ctttacagca caacttggca ggacgtggat ttcacacga tgcctttttc 750
 agcccttcca attcctgcct tcttttcaga agtgagtgtc ccagaaaaga 800
 caattgtaca gcaaaggaat ggacttttcc tgaagctaaa tggaacacca 850
 cagccagagt tttcagtcac atcogtcttg gcatgggcca tgttcttatt 900
 atagtccagt gttttatttc ttcaatggct aatatctata atgaaaagat 950
 actgaaggag gggaaccagc tcaactgaaag catcttcata cagaacagca 1000
 aactctatTTt ctttggcatt ctgtttaatg ggctgactct gggccttcag 1050
 aggagtaacc gtgatcagat taagaactgt ggattttttt atggccacag 1100
 tgcattttca gtagccctta tttttgtaac tgcattccag ggcctttcag 1150
 tggctttcat tctgaagtTC ctggataaca tgttccatgt cttgatggcc 1200
 caggttacca ctgtcattat cacaacagtg tctgtcctgg tctttgactt 1250
 caggccctcc ctggaatttt tcttggaagc cccatcagtc cttctctcta 1300
 tattttattta taatgccagc aagcctcaag ttccggaata cgcacctagg 1350
 caagaaagga tccgagatct aagtggcaat ctttgggagc gttccagtgg 1400
 ggatggagaa gaactagaaa gacttaccaa acccaagagt gatgagtcag 1450
 atgaagatac tttctaactg gtaaccacat agtttgcagc tctcttgaac 1500
 cttattttca cattttcagt gtttgtaata tttatctttt cactttgata 1550
 aaccagaaat gtttctaaat cctaatttc tttgcatata tctagctact 1600
 ccctaaatgg ttccatccaa ggcttagagt acccaaaggc taagaaattc 1650
 taaagaactg atacaggagt aacaatatga agaattcatt aatatctcag 1700
 tacttgataa atcagaaagt tatatgtgca gattattttc cttggccttc 1750
 aagcttccaa aaaacttgta ataatcatgt tagctatagc ttgtatatac 1800
 acatagagat caatttgcca aatattcaca atcatgtagt tctagtttac 1850
 atgccaaagt cttccctttt taacattata aaagctaggt tgtctcttga 1900
 attttgaggc cctagagata gtcattttgc aagtaaagag caacgggacc 1950
 ctttctaaaa acgttgggtg aaggacctaa atacctggcc ataccataga 2000
 tttgggatga tgtagtctgt gctaaatatt ttgctgaaga agcagtttct 2050

Ala Met Ala Val	Ile Phe Ser Asn Phe	Ser Ile Ile Thr Thr	Ala
	125	130	135
Leu Leu Phe Arg	Ile Val Leu Lys Arg	Arg Leu Asn Trp Ile	Gln
	140	145	150
Trp Ala Ser Leu	Leu Thr Leu Phe Leu	Ser Ile Val Ala Leu	Thr
	155	160	165
Ala Gly Thr Lys	Thr Leu Gln His Asn	Leu Ala Gly Arg Gly	Phe
	170	175	180
His His Asp Ala	Phe Phe Ser Pro Ser	Asn Ser Cys Leu Leu	Phe
	185	190	195
Arg Ser Glu Cys	Pro Arg Lys Asp Asn	Cys Thr Ala Lys Glu	Trp
	200	205	210
Thr Phe Pro Glu	Ala Lys Trp Asn Thr	Thr Ala Arg Val Phe	Ser
	215	220	225
His Ile Arg Leu	Gly Met Gly His Val	Leu Ile Ile Val Gln	Cys
	230	235	240
Phe Ile Ser Ser	Met Ala Asn Ile Tyr	Asn Glu Lys Ile Leu	Lys
	245	250	255
Glu Gly Asn Gln	Leu Thr Glu Ser Ile	Phe Ile Gln Asn Ser	Lys
	260	265	270
Leu Tyr Phe Phe	Gly Ile Leu Phe Asn	Gly Leu Thr Leu Gly	Leu
	275	280	285
Gln Arg Ser Asn	Arg Asp Gln Ile Lys	Asn Cys Gly Phe Phe	Tyr
	290	295	300
Gly His Ser Ala	Phe Ser Val Ala Leu	Ile Phe Val Thr Ala	Phe
	305	310	315
Gln Gly Leu Ser	Val Ala Phe Ile Leu	Lys Phe Leu Asp Asn	Met
	320	325	330
Phe His Val Leu	Met Ala Gln Val Thr	Thr Val Ile Ile Thr	Thr
	335	340	345
Val Ser Val Leu	Val Phe Asp Phe Arg	Pro Ser Leu Glu Phe	Phe
	350	355	360
Leu Glu Ala Pro	Ser Val Leu Leu Ser	Ile Phe Ile Tyr Asn	Ala
	365	370	375
Ser Lys Pro Gln	Val Pro Glu Tyr Ala	Pro Arg Gln Glu Arg	Ile
	380	385	390
Arg Asp Leu Ser	Gly Asn Leu Trp Glu	Arg Ser Ser Gly Asp	Gly
	395	400	405
Glu Glu Leu Glu	Arg Leu Thr Lys Pro	Lys Ser Asp Glu Ser	Asp
	410	415	420
Glu Asp Thr Phe			

<210> 15
 <211> 755
 <212> DNA
 <213> Homo sapiens

<400> 15
 cgtgcctgcg caatgggtgt cgggtcoget ttttccaat ccggacgtaa 50
 tcgtggtttt tgttctgcaa taggcggcct agagggaggg gctttttcgc 100
 ctatacctac tgtagcttct ccacgtatgg accctaaagg ctactgctgc 150
 tactacgggg ctagacagtt actgtctcag ctctaggatg tgcgttcttc 200
 cactagaagc tcttctgagg gaggttaatta aaaaacagtg gaatggaaaa 250
 acagtgcgtg agtcatcctg taatatgctc cttgtcaaca atgtatacat 300
 tcctgctagg tgccatattc attgctttta gctcaagtcg catcttacta 350
 gtgaagtatt ctgccaatga agaaaacaag tatgattatc ttccaactac 400
 tgtgaatgtg tgctcagaac tgggtgaagct agttttctgt gtgcttgtgt 450
 cattctgtgt tataaagaaa gatcatcaaa gtagaaattt gaaatatgct 500
 tcctggaagg aattctctga tttcatgaag tgggccattc ctgcctttct 550
 ttatttcctg gataaactga ttgtcttcta tgtcctgtcc tatcttcaac 600
 cagccatggc tgttatcttc tcaaatttta gcattataac aacagctctt 650
 ctattcagga tagtgctgaa gaggcgtcta aactggatcc agtgggcttc 700
 cctcctgact ttatttttgt ctattgtggc cttgactgcc gggactaaaa 750
 cttta 755

<210> 16
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 16
 ctatacctac tgtagcttct 20

<210> 17
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 17
 tcagagaatt ccttccagga 20

<210> 18
 <211> 40
 <212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 18

acagtgtctgt agtcatcctg taatatgctc cttgtcaaca 40

<210> 19

<211> 2142

<212> DNA

<213> Homo sapiens

<400> 19

cggacgcgtg ggcggacgcg tgggcggacg cgtggggccg gcttggctag 50
cgcgcgggcg ccgtggctaa ggctgctacg aagcgagctt gggaggagca 100
gcggcctgcg gggcagagga gcatcccgtc taccaggtcc caagcggcgt 150
ggcccgcggg tcatggccaa aggagaaggc gccgagagcg gctccgcggc 200
ggggctgcta cccaccagca tcctccaaag cactgaacgc ccggcccagg 250
tgaagaaaga accgaaaaag aagaaacaac agttgtctgt ttgcaacaag 300
ctttgctatg cacttggggg agccccctac caggtgacgg gctgtgccct 350
gggtttcttc cttcagatct acctattgga tgtggctcag gtgggccctt 400
tctctgcctc catcatcctg tttgtgggcc gagcctggga tgccatcaca 450
gacccctggg tgggcctctg catcagcaaa tccccctgga cctgcctggg 500
tcgccttatg ccctggatca tcttctccac gccctggcc gtcattgcct 550
acttcctcat ctggttcgtg ccgacttcc cacacggcca gacctattgg 600
tacctgcttt tctattgcct ctttgaaaca atggtcacgt gtttccatgt 650
tcctactcg gctctcacca tgttcatcag caaccgagca gactgagcgg 700
gattctgcca ccgcctatcg gatgactgtg gaagtgtctg gcacagtgt 750
gggcacggcg atccaggac aaatcgtggg ccaagcagac acgccttggt 800
tcaggactt caatagctct acagtagctt caciaagtgc caaccataca 850
catggcacca cttcacacag ggaaacgcaa aaggcatacc tgctggcagc 900
gggggtcatt gtctgtatct atataatctg tgctgtcatc ctgatcctgg 950
gcgtgcggga gcagagagaa ccctatgaag ccagcagtc tgagccaatc 1000
gcctacttcc ggggcctacg gctggtcacg agccaaggcc catacatcaa 1050
acttattact ggcttcctct tcacctcctt ggctttcatg ctgggtggagg 1100
ggaactttgt cttgttttgc acctacacct tgggcttccg caatgaattc 1150
cagaatctac tcctggccat catgctctcg gccactttaa ccattcccat 1200
ctggcagtgg ttcttgacct ggtttggcaa gaagacagct gtatatgttg 1250

ggatctcatc agcagtgcc a tttctcatct tgggtggccct catggagagt 1300
aacctcatca ttacatatgc ggtagctgtg gcagctggca tcagtgtggc 1350
agctgccttc ttactacct ggtccatgct gcctgatgtc attgacgact 1400
tccatctgaa gcagccccac ttccatggaa ccgagcccat cttcttctcc 1450
ttctatgtct tcttcaccaa gtttgcctct ggagtgtcac tgggcatttc 1500
taccctcagt ctggactttg cagggtagca gaccctgggc tgctgcgagc 1550
cggaacgtgt caagtttaca ctgaacatgc tcgtgacct ggctcccata 1600
gttctcatcc tgctgggcct gctgctcttc aaaatgtacc ccattgatga 1650
ggagaggcgg cggcagaata agaaggccct gcaggcactg agggacgagg 1700
ccagcagctc tggctgctca gaaacagact ccacagagct ggctagcatc 1750
ctctagggcc cgccacgttg cccgaagcca ccatgcagaa ggccacagaa 1800
gggatcagga cctgtctgcc ggcttgctga gcagctggac tgcaggtgct 1850
aggaaggga ctgaagactc aaggagggtg cccaggacac ttgctgtgct 1900
cactgtgggg ccggtgctc tgtggcctcc tgctccct ctgctgct 1950
gtggggccaa gccctggggc tgccactgtg aatatgccaa ggactgatcg 2000
ggcctagccc ggaacactaa ttagaaaacc ttttttttac agagccta 2050
taataactta atgactgtgt acatagcaat gtgtgtgtat gtatatgtct 2100
gtgagctatt aatgttatta attttcataa aagctggaaa gc 2142

<210> 20
<211> 458
<212> PRT
<213> Homo sapiens

<400> 20
Met Trp Leu Arg Trp Ala Leu Ser Leu Pro Pro Ser Ser Cys Leu
1 5 10 15
Trp Ala Glu Pro Gly Met Pro Ser Gln Thr Pro Trp Trp Ala Ser
20 25 30
Ala Ser Ala Asn Pro Pro Gly Pro Ala Trp Val Ala Leu Cys Pro
35 40 45
Gly Ser Ser Ser Pro Arg Pro Trp Pro Ser Leu Pro Thr Ser Ser
50 55 60
Ser Gly Ser Cys Pro Thr Ser His Thr Ala Arg Pro Ile Gly Thr
65 70 75
Cys Phe Ser Ile Ala Ser Leu Lys Gln Trp Ser Arg Val Ser Met
80 85 90
Phe Pro Thr Arg Leu Ser Pro Cys Ser Ser Ala Thr Glu Gln Thr
95 100 105

Glu	Arg	Asp	Ser	Ala	Thr	Ala	Tyr	Arg	Met	Thr	Val	Glu	Val	Leu	110	115	120
Gly	Thr	Val	Leu	Gly	Thr	Ala	Ile	Gln	Gly	Gln	Ile	Val	Gly	Gln	125	130	135
Ala	Asp	Thr	Pro	Cys	Phe	Gln	Asp	Phe	Asn	Ser	Ser	Thr	Val	Ala	140	145	150
Ser	Gln	Ser	Ala	Asn	His	Thr	His	Gly	Thr	Thr	Ser	His	Arg	Glu	155	160	165
Thr	Gln	Lys	Ala	Tyr	Leu	Leu	Ala	Ala	Gly	Val	Ile	Val	Cys	Ile	170	175	180
Tyr	Ile	Ile	Cys	Ala	Val	Ile	Leu	Ile	Leu	Gly	Val	Arg	Glu	Gln	185	190	195
Arg	Glu	Pro	Tyr	Glu	Ala	Gln	Gln	Ser	Glu	Pro	Ile	Ala	Tyr	Phe	200	205	210
Arg	Gly	Leu	Arg	Leu	Val	Met	Ser	His	Gly	Pro	Tyr	Ile	Lys	Leu	215	220	225
Ile	Thr	Gly	Phe	Leu	Phe	Thr	Ser	Leu	Ala	Phe	Met	Leu	Val	Glu	230	235	240
Gly	Asn	Phe	Val	Leu	Phe	Cys	Thr	Tyr	Thr	Leu	Gly	Phe	Arg	Asn	245	250	255
Glu	Phe	Gln	Asn	Leu	Leu	Leu	Ala	Ile	Met	Leu	Ser	Ala	Thr	Leu	260	265	270
Thr	Ile	Pro	Ile	Trp	Gln	Trp	Phe	Leu	Thr	Arg	Phe	Gly	Lys	Lys	275	280	285
Thr	Ala	Val	Tyr	Val	Gly	Ile	Ser	Ser	Ala	Val	Pro	Phe	Leu	Ile	290	295	300
Leu	Val	Ala	Leu	Met	Glu	Ser	Asn	Leu	Ile	Ile	Thr	Tyr	Ala	Val	305	310	315
Ala	Val	Ala	Ala	Gly	Ile	Ser	Val	Ala	Ala	Ala	Phe	Leu	Leu	Pro	320	325	330
Trp	Ser	Met	Leu	Pro	Asp	Val	Ile	Asp	Asp	Phe	His	Leu	Lys	Gln	335	340	345
Pro	His	Phe	His	Gly	Thr	Glu	Pro	Ile	Phe	Phe	Ser	Phe	Tyr	Val	350	355	360
Phe	Phe	Thr	Lys	Phe	Ala	Ser	Gly	Val	Ser	Leu	Gly	Ile	Ser	Thr	365	370	375
Leu	Ser	Leu	Asp	Phe	Ala	Gly	Tyr	Gln	Thr	Arg	Gly	Cys	Ser	Gln	380	385	390
Pro	Glu	Arg	Val	Lys	Phe	Thr	Leu	Asn	Met	Leu	Val	Thr	Met	Ala	395	400	405
Pro	Ile	Val	Leu	Ile	Leu	Leu	Gly	Leu	Leu	Leu	Phe	Lys	Met	Tyr	410	415	420

Pro Ile Asp Glu Glu Arg Arg Arg Gln Asn Lys Lys Ala Leu Gln
 425 430 435

Ala Leu Arg Asp Glu Ala Ser Ser Ser Gly Cys Ser Glu Thr Asp
 440 445 450

Ser Thr Glu Leu Ala Ser Ile Leu
 455

<210> 21
 <211> 571
 <212> DNA
 <213> Homo sapiens

<400> 21
 gggaaacgca aaaggcatac ctgctggcag cgggggtcat tgtctgtatc 50
 tatataatct gtgctgtcat cctgatcctg ggcgtgcggg agcagagaga 100
 accctatgaa gcccagcagt ctgagccaat cgcctacttc cggggcctac 150
 ggctgggtcat gagccaacggc ccatacatca aacttattac tggcttcctc 200
 ttcacctcct tggttttcat gctggtggag gggaactttg tcttgttttg 250
 cacctacacc ttgggcttcc gcaatgaatt ccagaatcta ctcctggcca 300
 tcatgctctc ggccacttta accattccca tctggcagtg gttcttgacc 350
 cggttttgga agaagacagc tgtatatgtt gggatctcat cagcagtgcc 400
 atttctcatc ttggtggccc tcatggagag taacctcatc attacatatg 450
 cggtagctgt ggcagctggc atcagtgtgg cagctgcctt cttactaccc 500
 tgggccatgc tgctgatgt cattgacgac ttccatctga agcagcccca 550
 cttccatgga accgagccca t 571

<210> 22
 <211> 1173
 <212> DNA
 <213> Homo sapiens

<400> 22
 ggggcttcgg cgccagcggc cagcgctagt cggctctggta aggatttaca 50
 aaaggtgcag gtatgagcag gtctgaagac taacattttg tgaagttgta 100
 aaacagaaaa cctgttagaa atgtggtggt ttcagcaagg cctcagtttc 150
 cttccttcag cccttgtaat ttggacatct gctgctttca tattttcata 200
 cattactgca gtaacactcc accatataga cccggcttta ctttatatca 250
 gtgacactgg tacagtagct ccagaaaaat gcttatttgg ggcaatgcta 300
 aatattgcgg cagttttatg cattgctacc atttatgttc gttataagca 350
 agttcatgct ctgagtcctg aagagaacgt tatcatcaaa ttaaacaagg 400
 ctggccttgt acttgggaata ctgagttggt taggactttc tattgtggca 450

aacttccaga aaacaaccct ttttgctgca catgtaagtg gagctgtgct 500
 taccttttgg atggggtcat tatatatgtt tgttcagacc atcctttcct 550
 accaaatgca gcccaaaatc catggcaaac aagtcttctg gatcagactg 600
 ttgtttggtta tctgggtgtgg agtaagtgca cttagcatgc tgacttgctc 650
 atcagttttg cacagtggca attttgggac tgatttagaa cagaaactcc 700
 attggaaccc cgaggacaaa gggttatgtgc ttcacatgat cactactgca 750
 gcagaatggg ctatgtcatt ttcttctttt gggtttttcc tgacttacat 800
 tcgtgatttt cagaaaattt ctttacgggt ggaagccaat ttacatggat 850
 taaccctcta tgacactgca ccttgcccta ttaacaatga acgaacacgg 900
 ctactttcca gagatatttg atgaaaggat aaaatatttc tgtaatgatt 950
 atgattctca gggattgggg aaaggttcac agaagttgct tattcttctc 1000
 tgaaaatttc aaccacttaa tcaaggctga cagtaacact gatgaatgct 1050
 gataatcagg aaacatgaaa gaagccattt gatagattat tctaaaggat 1100
 atcatcaaga agactattaa aaacacctat gcctatactt ttttatctca 1150
 gaaaataaag tcaaaagact atg 1173

<210> 23
 <211> 266
 <212> PRT
 <213> Homo sapiens

<400> 23
 Met Trp Trp Phe Gln Gln Gly Leu Ser Phe Leu Pro Ser Ala Leu
 1 5 10 15
 Val Ile Trp Thr Ser Ala Ala Phe Ile Phe Ser Tyr Ile Thr Ala
 20 25 30
 Val Thr Leu His His Ile Asp Pro Ala Leu Pro Tyr Ile Ser Asp
 35 40 45
 Thr Gly Thr Val Ala Pro Glu Lys Cys Leu Phe Gly Ala Met Leu
 50 55 60
 Asn Ile Ala Ala Val Leu Cys Ile Ala Thr Ile Tyr Val Arg Tyr
 65 70 75
 Lys Gln Val His Ala Leu Ser Pro Glu Glu Asn Val Ile Ile Lys
 80 85 90
 Leu Asn Lys Ala Gly Leu Val Leu Gly Ile Leu Ser Cys Leu Gly
 95 100 105
 Leu Ser Ile Val Ala Asn Phe Gln Lys Thr Thr Leu Phe Ala Ala
 110 115 120
 His Val Ser Gly Ala Val Leu Thr Phe Gly Met Gly Ser Leu Tyr
 125 130 135

Met	Phe	Val	Gln	Thr	Ile	Leu	Ser	Tyr	Gln	Met	Gln	Pro	Lys	Ile	
				140					145					150	
His	Gly	Lys	Gln	Val	Phe	Trp	Ile	Arg	Leu	Leu	Leu	Val	Ile	Trp	
				155					160					165	
Cys	Gly	Val	Ser	Ala	Leu	Ser	Met	Leu	Thr	Cys	Ser	Ser	Val	Leu	
				170					175					180	
His	Ser	Gly	Asn	Phe	Gly	Thr	Asp	Leu	Glu	Gln	Lys	Leu	His	Trp	
				185					190					195	
Asn	Pro	Glu	Asp	Lys	Gly	Tyr	Val	Leu	His	Met	Ile	Thr	Thr	Ala	
				200					205					210	
Ala	Glu	Trp	Ser	Met	Ser	Phe	Ser	Phe	Phe	Gly	Phe	Phe	Leu	Thr	
				215					220					225	
Tyr	Ile	Arg	Asp	Phe	Gln	Lys	Ile	Ser	Leu	Arg	Val	Glu	Ala	Asn	
				230					235					240	
Leu	His	Gly	Leu	Thr	Leu	Tyr	Asp	Thr	Ala	Pro	Cys	Pro	Ile	Asn	
				245					250					255	
Asn	Glu	Arg	Thr	Arg	Leu	Leu	Ser	Arg	Asp	Ile					
				260					265						

<210> 24
 <211> 485
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 14, 484
 <223> unknown base

<400> 24
 cggacgcttg ggcngcgcca gcggccagcg ctagtcggtc tggtaagtgc 50
 ctgatgccga gttccgtctc tcgggtcttt tcttggtccc aggcaaagcg 100
 gagcggagat cctcaaacgg cctagtgtct cgcgcttccg gagaaaatca 150
 gcggtctaataaattcctct gggtttgttga agcagttacc aagaatcttc 200
 aaccctttcc cacaaaagct aattgagtac acgttctctg tgagtacacg 250
 ttctgttga ttacaaaag gtgcaggtat gagcaggtct gaagactaac 300
 attttgtgaa gttgtaaaac agaaaacctg ttagaaatgt ggtgggttca 350
 gcaaggcctc agtttccttc cttcagccct tgtaatttgg acatctgctg 400
 ctttcatatt ttcatatt actgcagtaa cactccacca tatagaccg 450
 gctttacctt atatcagtga cactggtaca gtanc 485

<210> 25
 <211> 40
 <212> DNA
 <213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 25
acctgttaga aatgtggtgg tttcagcaag gcctcagttt 40

<210> 26
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 26
ggagatagct gctatgggtt cttcaggcac aacttaacat gggaag 46

<210> 27
<211> 1399
<212> DNA
<213> Homo sapiens

<400> 27
cccacgcgtc cgcccgccgc tgcgtcccg agtgcaagtg agcttctcgg 50
ctgccccgcg ggccgggggtg cggagccgac atgcgccccgc ttctcggcct 100
ccttctgggtc ttccgcccgt gcaccttcgc cttgtacttg ctgtcgacgc 150
gactgccccg cgggcggaga ctgggctcca ccgaggaggc tggaggcagg 200
tcgctgtggt tcccctccga cctggcagag ctgcgggagc tctctgaggt 250
ccttcgagag taccggaagg agcaccaggc ctacgtgttc ctgctcttct 300
gcggcgcccta cctctacaaa cagggttttg ccatccccgg ctccagcttc 350
ctgaatgttt tagctgggtgc cttgtttggg ccatggctgg ggcttctgct 400
gtgctgtgtg ttgacctcgg tgggtgccac atgctgctac ctgctctcca 450
gtattttttgg caaacagttg gtggtgtcct actttcctga taaagtggcc 500
ctgctgcaga gaaaggtgga ggagaacaga aacagcttgt tttttttctt 550
attgtttttg agacttttcc ccatgacacc aaactgggtc ttgaacctct 600
cggccccaat tctgaacatt cccatcgtgc agttcttctt ctcagttctt 650
atcggtttga tcccatataa tttcatctgt gtgcagacag ggtccatcct 700
gtcaacccta acctctctgg atgtcttttt ctctgggac actgtcttta 750
agctgttggc cattgccatg gtggcattaa ttcctggaac cctcattaaa 800
aaatttagtc agaaacatct gcaattgaat gaaacaagta ctgctaata 850
tatacacagt agaaaagaca catgatctgg attttctgtt tgccacatcc 900
ctggactcag ttgcttattt gtgtaatgga tgtggctctc taaagcccct 950
cattgttttt gattgccttc tataggtgat gtggacactg tgcataaatg 1000

tgcagtgtct tttcagaaaag gacactctgc tcttgaaggt gtattacatc 1050
 aggttttcaa accagccctg gtgtagcaga cactgcaaca gatgcctcct 1100
 agaaaatgct gtttgtggcc gggcgcggtg gctcacgcct gtaatcccag 1150
 cactttggga ggccgaggcc ggtgattcac aaggtcagga gttcaagacc 1200
 agcctggcca agatggtgaa atcctgtctc taataaaaat acaaaaatta 1250
 gccaggcgtg gtggcaggca cctgtaatcc cagctactcg ggaggctgag 1300
 gcaggagaat tgcttgaacc aaggtggcag aggttgcagt aagccaagat 1350
 cacaccactg cactccagcc tgggtgatag agtgagacac tgtcttgac 1399

<210> 28

<211> 264

<212> PRT

<213> Homo sapiens

<400> 28

Met	Arg	Pro	Leu	Leu	Gly	Leu	Leu	Leu	Val	Phe	Ala	Gly	Cys	Thr	1	5	10	15
Phe	Ala	Leu	Tyr	Leu	Leu	Ser	Thr	Arg	Leu	Pro	Arg	Gly	Arg	Arg	20	25	30	
Leu	Gly	Ser	Thr	Glu	Glu	Ala	Gly	Gly	Arg	Ser	Leu	Trp	Phe	Pro	35	40	45	
Ser	Asp	Leu	Ala	Glu	Leu	Arg	Glu	Leu	Ser	Glu	Val	Leu	Arg	Glu	50	55	60	
Tyr	Arg	Lys	Glu	His	Gln	Ala	Tyr	Val	Phe	Leu	Leu	Phe	Cys	Gly	65	70	75	
Ala	Tyr	Leu	Tyr	Lys	Gln	Gly	Phe	Ala	Ile	Pro	Gly	Ser	Ser	Phe	80	85	90	
Leu	Asn	Val	Leu	Ala	Gly	Ala	Leu	Phe	Gly	Pro	Trp	Leu	Gly	Leu	95	100	105	
Leu	Leu	Cys	Cys	Val	Leu	Thr	Ser	Val	Gly	Ala	Thr	Cys	Cys	Tyr	110	115	120	
Leu	Leu	Ser	Ser	Ile	Phe	Gly	Lys	Gln	Leu	Val	Val	Ser	Tyr	Phe	125	130	135	
Pro	Asp	Lys	Val	Ala	Leu	Leu	Gln	Arg	Lys	Val	Glu	Glu	Asn	Arg	140	145	150	
Asn	Ser	Leu	Phe	Phe	Phe	Leu	Leu	Phe	Leu	Arg	Leu	Phe	Pro	Met	155	160	165	
Thr	Pro	Asn	Trp	Phe	Leu	Asn	Leu	Ser	Ala	Pro	Ile	Leu	Asn	Ile	170	175	180	
Pro	Ile	Val	Gln	Phe	Phe	Phe	Ser	Val	Leu	Ile	Gly	Leu	Ile	Pro	185	190	195	
Tyr	Asn	Phe	Ile	Cys	Val	Gln	Thr	Gly	Ser	Ile	Leu	Ser	Thr	Leu	200	205	210	

Thr	Ser	Leu	Asp	Ala	Leu	Phe	Ser	Trp	Asp	Thr	Val	Phe	Lys	Leu
				215					220					225
Leu	Ala	Ile	Ala	Met	Val	Ala	Leu	Ile	Pro	Gly	Thr	Leu	Ile	Lys
				230					235					240
Lys	Phe	Ser	Gln	Lys	His	Leu	Gln	Leu	Asn	Glu	Thr	Ser	Thr	Ala
				245					250					255
Asn	His	Ile	His	Ser	Arg	Lys	Asp	Thr						
				260										

<210> 29
 <211> 1292
 <212> DNA
 <213> Homo sapiens

<400> 29
 ccgaggcgagg aggagcccgga gggggcgcgga gccccgcatg aatcattgta 50
 gtcaatcatt ttccagttct cagccgctca gttgtgatca agggacacgt 100
 ggtttccgaa ctgccagctc agaataggaa aataacttgg gattttatat 150
 tggaagacat ggatcttgct gccaacgaga tcagcattta tgacaaactt 200
 tcagagactg ttgatttggg gagacagacc ggccatcagt gtggcatgtc 250
 agagaaggca attgaaaaat ttatcagaca gctgctggaa aagaatgaac 300
 ctgagagacc cccccgcag tatcctctcc ttatagttgt gtataagggt 350
 ctgcaacct tgggattaat cttgctcact gcctactttg tgattcaacc 400
 tttcagccca ttagcacctg agccagtgtt ttctggagct cacacctggc 450
 gctcactcat ccatcacatt aggctgatgt ccttgcccat tgccaagaag 500
 tacatgtcag aaaataaggg agttcctctg catgggggtg atgaagacag 550
 accctttcca gactttgacc cctggtggac aaacgactgt gagcagaatg 600
 agtcagagcc cattcctgcc aactgcaactg gctgtgcca gaaacacctg 650
 aaggtgatgc tcctggaaga cgccccaaagg aaatttgaga ggctccatcc 700
 actggtgatc aagacgggaa agcccctgtt ggaggaagag attcagcatt 750
 ttttgtgcca gtacctgag gcgacagaag gcttctctga agggtttttc 800
 gccaaagtggg ggcgctgctt tcctgagcgg tggttcccat ttccttatcc 850
 atggaggaga cctctgaaca gatcacaaat gttacgtgag ctttttctctg 900
 ttttactca cctgccattt caaaagatg cctctttaa caagtgtctc 950
 tttcttcacc cagaacctgt tgtggggagt aagatgcata agatgcctga 1000
 cctatttatc attggcagcg gtgaggccat gttgcagctc atccctccct 1050
 tccagtgccg aagacattgt cagtctgtgg ccatgccaat agagccaggg 1100
 gatatcggct atgtcgacac caccactgg aaggtctacg ttatagccag 1150

aggggtccag cctttggtca totgcatgg aacgctttc tcagaactgt 1200
 aggaaataga actgtgcaca ggaacagctt ccagagccga aaaccagggt 1250
 gaaaggggaa aaataaaaaac aaaaacgatg aaactgcaaa aa 1292

<210> 30
 <211> 347
 <212> PRT
 <213> Homo sapiens

<400> 30
 Met Asp Leu Ala Ala Asn Glu Ile Ser Ile Tyr Asp Lys Leu Ser
 1 5 10 15
 Glu Thr Val Asp Leu Val Arg Gln Thr Gly His Gln Cys Gly Met
 20 25 30
 Ser Glu Lys Ala Ile Glu Lys Phe Ile Arg Gln Leu Leu Glu Lys
 35 40 45
 Asn Glu Pro Gln Arg Pro Pro Pro Gln Tyr Pro Leu Leu Ile Val
 50 55 60
 Val Tyr Lys Val Leu Ala Thr Leu Gly Leu Ile Leu Leu Thr Ala
 65 70 75
 Tyr Phe Val Ile Gln Pro Phe Ser Pro Leu Ala Pro Glu Pro Val
 80 85 90
 Leu Ser Gly Ala His Thr Trp Arg Ser Leu Ile His His Ile Arg
 95 100 105
 Leu Met Ser Leu Pro Ile Ala Lys Lys Tyr Met Ser Glu Asn Lys
 110 115 120
 Gly Val Pro Leu His Gly Gly Asp Glu Asp Arg Pro Phe Pro Asp
 125 130 135
 Phe Asp Pro Trp Trp Thr Asn Asp Cys Glu Gln Asn Glu Ser Glu
 140 145 150
 Pro Ile Pro Ala Asn Cys Thr Gly Cys Ala Gln Lys His Leu Lys
 155 160 165
 Val Met Leu Leu Glu Asp Ala Pro Arg Lys Phe Glu Arg Leu His
 170 175 180
 Pro Leu Val Ile Lys Thr Gly Lys Pro Leu Leu Glu Glu Glu Ile
 185 190 195
 Gln His Phe Leu Cys Gln Tyr Pro Glu Ala Thr Glu Gly Phe Ser
 200 205 210
 Glu Gly Phe Phe Ala Lys Trp Trp Arg Cys Phe Pro Glu Arg Trp
 215 220 225
 Phe Pro Phe Pro Tyr Pro Trp Arg Arg Pro Leu Asn Arg Ser Gln
 230 235 240
 Met Leu Arg Glu Leu Phe Pro Val Phe Thr His Leu Pro Phe Pro
 245 250 255

Lys	Asp	Ala	Ser	Leu	Asn	Lys	Cys	Ser	Phe	Leu	His	Pro	Glu	Pro
				260					265					270
Val	Val	Gly	Ser	Lys	Met	His	Lys	Met	Pro	Asp	Leu	Phe	Ile	Ile
				275					280					285
Gly	Ser	Gly	Glu	Ala	Met	Leu	Gln	Leu	Ile	Pro	Pro	Phe	Gln	Cys
				290					295					300
Arg	Arg	His	Cys	Gln	Ser	Val	Ala	Met	Pro	Ile	Glu	Pro	Gly	Asp
				305					310					315
Ile	Gly	Tyr	Val	Asp	Thr	Thr	His	Trp	Lys	Val	Tyr	Val	Ile	Ala
				320					325					330
Arg	Gly	Val	Gln	Pro	Leu	Val	Ile	Cys	Asp	Gly	Thr	Ala	Phe	Ser
				335					340					345

Glu Leu

<210> 31
 <211> 478
 <212> DNA
 <213> Homo sapiens

<400> 31
 ccacggtgtc cgttcttcgc ccggcggcag ctgtccccga ggcgggagga 50
 gcccgagggg cgcgagcccc gcatgaatca ttgtagtcaa tcattttcca 100
 gttctcagcc gttcagttgt gatcaaggga cacgtggttt ccgaactgcc 150
 agctcagaat aggaaaataa cttgggattt tatattggaa gacatggatc 200
 ttgctgccaa cgagatcagc atttatgaca aactttcaga gactgttgat 250
 ttggtgagac agaccggcca tcagtgtggc atgtcagaga aggcaattga 300
 aaaatttatc agacagctgc tggaaaagaa tgaacctcag agaccccccc 350
 cgcagtatcc tctccttata gttgtgtata aggttctcgc aaccttgga 400
 ttaatcttgc tcaactgccta ctttgtgatt caacctttca gcccattagc 450
 acctgagcca gtgctttgtg gagctcac 478

<210> 32
 <211> 3531
 <212> DNA
 <213> Homo sapiens

<400> 32
 cccacgcgtc cgccacgcg tccggtgaa cacctcttct ttggagtcag 50
 ccaactgatga ggcaggggtcc ccaacttcag ctgcagcagc tgcagcagct 100
 gcagagcgct gtcctggct ggtgccactg gtgcgcacgc tgctagaccg 150
 tgcctatgag ccgctggggc tgcagtgggg actgccctcc ctgccacca 200
 ccaatggcag cccacacctt tttgaagact tccaggcttt ttgtgccaca 250

cccgaatggc gccacttcat cgacaaacag gtacagccaa ccatgtccca 300
 gttcgaaatg gacacgtatg ctaagagcca cgaccttatg tcaggtttct 350
 ggaatgcctg ctatgacatg cttatgagca gtgggcagcg gcgccagtgg 400
 gagcgcgccc agagtcgtcg ggccttccag gagctggtgc tggaacctgc 450
 gcagaggcgg gcgcgcctgg aggggctacg ctacacggca gtgctgaagc 500
 agcaggcaac gcagcactcc atggccctgc tgcactgggg ggcgctgtgg 550
 cgccagctcg ccagcccatg tggggcctgg gcgctgaggg acactcccat 600
 cccccgtgg aaactgtcca gcgccgagac atattcacgc atgcgtctga 650
 agctggtgcc caaccatcac ttcgaccctc acctggaagc cagcgctctc 700
 cgagacaatc tgggtgaggt tcccctgaca cccaccgagg aggcctcact 750
 gcctctggca gtgaccaaag aggccaaagt gagcacccca cccgagttgc 800
 tgcaggagga ccagctcggc gaggacgagc tggctgagct ggagaccccg 850
 atggaggcag cagaactgga tgagcagcgt gagaagctgg tgctgtcggc 900
 cgagtgccag ctggtgacgg tagtgccgt ggtcccaggg ctgctggagg 950
 tcaccacaca gaatgtatac ttctacgatg gcagcactga gcgcgtggaa 1000
 accgaggagg gcatcggcta tgatttccgg cgcctactgg cccagctcgc 1050
 tgaggtccac ctgcggcgtt tcaacctgcg ccgttcagca cttgagctct 1100
 tctttatcga tcaggccaac tacttctca acttcccatg caagggtgggc 1150
 acgaccccag tctcatctcc tagccagact ccgagacccc agcctggccc 1200
 catcccacc catacccagg tacggaacca ggtgtactcg tggtcctgc 1250
 gcctacggcc cccctctcaa ggctacctaa gcagccgctc cccccaggag 1300
 atgctgcgtg cctcaggcct taccagaaa tgggtacagc gtgagatata 1350
 caacttcgag tacttgatgc aactcaacac cattgcgggg cggaacctaca 1400
 atgacctgtc tcagtaccct gtgttccct gggtcctgca ggactacgtg 1450
 tccccaaccc tggacctcag caaccagcc gtcttccggg acctgtctaa 1500
 gcccatcggg gtggtgaacc ccaagcatgc ccagctcgtg agggagaagt 1550
 atgaaagctt tgaggacca gcagggacca ttgacaagtt ccaactatggc 1600
 acccactact ccaatgcagc aggcgtgatg cactacctca tccgcgtgga 1650
 gcccttcacc tccctgcacg tccagctgca aagtggccgc tttgactgct 1700
 ccgaccggca gttccactcg gtggcggcag cctggcaggc acgcctggag 1750
 agccctgccg atgtgaagga gctcatcccg gaattottct actttcctga 1800
 cttcctggag aaccagaacg gttttgacct gggctgtctc cagctgacca 1850

acgagaaggt aggcgatgtg gtgctacccc cgtggggccag ctctcctgag 1900
gacttcatcc agcagcaccg ccaggctctg gagtcggagt atgtgtctgc 1950
acacctacac gagtggatcg acctcatott tggctacaag cagcgggggc 2000
cagccgccga ggaggccctc aatgtottct attactgcac ctatgagggg 2050
gctgtagacc tggaccatgt gacagatgag cgggaacgga aggctctgga 2100
gggcattatc agcaactttg ggcagactcc ctgtcagctg ctgaaggagc 2150
cacatccaac tcggctctca gctgaggaag cagcccatcg cttgcacgc 2200
ctggacacta actcacctag catcttccag cacctggacg aactcaaggc 2250
attcttcgca gaggtgactg tgagtgccag tgggctgctg ggcaccaca 2300
gctggttgcc ctatgaccgc aacataagca actacttcag cttcagcaaa 2350
gacccaccca tgggcagcca caagacgcag cgactgctga gtggcccgtg 2400
ggtgccaggc agtgggtgtga gtggacaagc actggcagtg gcccggatg 2450
gaaagctgct attcagcggg gccactggg atggcagcct gcgggtgact 2500
gcactacccc gtggcaagct gttgagccag ctcagctgcc accttgatgt 2550
agtaacctgc cttgcaactgg acacctgtgg catctacctc atctcaggct 2600
cccgggacac cacgtgcatg gtgtggcggc tcctgcatca ggggtgtctg 2650
tcagtaggcc tggcaccaaa gcctgtgcag gtctgtatg ggcattggggc 2700
tgcaagtgagc tgtgtggcca tcagcactga acttgacatg gctgtgtctg 2750
gatctgagga tggaaactgtg atcatacaca ctgtacgccg cggacagttt 2800
gtagcggcac tacggcctct gggtgccaca ttccctggac ctattttcca 2850
cctggcattg ggggtccgaag gccagattgt ggtacagagc tcagcgtggg 2900
aacgtcctgg gggccaggtc acctactcct tgcacctgta ttcagtcaat 2950
gggaagttgc gggcttcact gcccctggca gagcagccta cagccctgac 3000
ggtgacagag gacttttgtt tgctgggcac cgcccagtgcc gccctgcaca 3050
tcctccaact aaacacactg ctcccggccg cgcctccctt gccatgaag 3100
gtggccatcc gcagcgtggc cgtgaccaag gagcgcagcc acgtgctggt 3150
gggcctggag gatggcaagc tcatcgtggt ggtcgcgggg cagccctctg 3200
agggtgcgcag cagccagttc gcgcggaagc tgtggcggtc ctcgcggcgc 3250
atctcccagg tgtcctcggg agagacggaa tacaacccta ctgaggcgcg 3300
ctgaacctgg ccagtcgggc tgcctggggc ccgccccggg caggcctggc 3350
ccgggaggcc ccgcccagaa gtcggcgga acaccccggg gtgggcagcc 3400
cagggggtga gcggggccca ccctgcccag ctcagggatt ggcgggcgat 3450

gttaccctcct cagggattgg cgggcggaag tcccggccct cgccggctga 3500
 ggggccgccc tgagggccag cactggcgtc t 3531

<210> 33
 <211> 1003
 <212> PRT
 <213> Homo sapiens

<400> 33
 Met Ser Gln Phe Glu Met Asp Thr Tyr Ala Lys Ser His Asp Leu
 1 5 10 15
 Met Ser Gly Phe Trp Asn Ala Cys Tyr Asp Met Leu Met Ser Ser
 20 25 30
 Gly Gln Arg Arg Gln Trp Glu Arg Ala Gln Ser Arg Arg Ala Phe
 35 40 45
 Gln Glu Leu Val Leu Glu Pro Ala Gln Arg Arg Ala Arg Leu Glu
 50 55 60
 Gly Leu Arg Tyr Thr Ala Val Leu Lys Gln Gln Ala Thr Gln His
 65 70 75
 Ser Met Ala Leu Leu His Trp Gly Ala Leu Trp Arg Gln Leu Ala
 80 85 90
 Ser Pro Cys Gly Ala Trp Ala Leu Arg Asp Thr Pro Ile Pro Arg
 95 100 105
 Trp Lys Leu Ser Ser Ala Glu Thr Tyr Ser Arg Met Arg Leu Lys
 110 115 120
 Leu Val Pro Asn His His Phe Asp Pro His Leu Glu Ala Ser Ala
 125 130 135
 Leu Arg Asp Asn Leu Gly Glu Val Pro Leu Thr Pro Thr Glu Glu
 140 145 150
 Ala Ser Leu Pro Leu Ala Val Thr Lys Glu Ala Lys Val Ser Thr
 155 160 165
 Pro Pro Glu Leu Leu Gln Glu Asp Gln Leu Gly Glu Asp Glu Leu
 170 175 180
 Ala Glu Leu Glu Thr Pro Met Glu Ala Ala Glu Leu Asp Glu Gln
 185 190 195
 Arg Glu Lys Leu Val Leu Ser Ala Glu Cys Gln Leu Val Thr Val
 200 205 210
 Val Ala Val Val Pro Gly Leu Leu Glu Val Thr Thr Gln Asn Val
 215 220 225
 Tyr Phe Tyr Asp Gly Ser Thr Glu Arg Val Glu Thr Glu Glu Gly
 230 235 240
 Ile Gly Tyr Asp Phe Arg Arg Pro Leu Ala Gln Leu Arg Glu Val
 245 250 255
 His Leu Arg Arg Phe Asn Leu Arg Arg Ser Ala Leu Glu Leu Phe
 260 265 270

Phe	Ile	Asp	Gln	Ala	Asn	Tyr	Phe	Leu	Asn	Phe	Pro	Cys	Lys	Val	
				275					280					285	
Gly	Thr	Thr	Pro	Val	Ser	Ser	Pro	Ser	Gln	Thr	Pro	Arg	Pro	Gln	
				290					295					300	
Pro	Gly	Pro	Ile	Pro	Pro	His	Thr	Gln	Val	Arg	Asn	Gln	Val	Tyr	
				305					310					315	
Ser	Trp	Leu	Leu	Arg	Leu	Arg	Pro	Pro	Ser	Gln	Gly	Tyr	Leu	Ser	
				320					325					330	
Ser	Arg	Ser	Pro	Gln	Glu	Met	Leu	Arg	Ala	Ser	Gly	Leu	Thr	Gln	
				335					340					345	
Lys	Trp	Val	Gln	Arg	Glu	Ile	Ser	Asn	Phe	Glu	Tyr	Leu	Met	Gln	
				350					355					360	
Leu	Asn	Thr	Ile	Ala	Gly	Arg	Thr	Tyr	Asn	Asp	Leu	Ser	Gln	Tyr	
				365					370					375	
Pro	Val	Phe	Pro	Trp	Val	Leu	Gln	Asp	Tyr	Val	Ser	Pro	Thr	Leu	
				380					385					390	
Asp	Leu	Ser	Asn	Pro	Ala	Val	Phe	Arg	Asp	Leu	Ser	Lys	Pro	Ile	
				395					400					405	
Gly	Val	Val	Asn	Pro	Lys	His	Ala	Gln	Leu	Val	Arg	Glu	Lys	Tyr	
				410					415					420	
Glu	Ser	Phe	Glu	Asp	Pro	Ala	Gly	Thr	Ile	Asp	Lys	Phe	His	Tyr	
				425					430					435	
Gly	Thr	His	Tyr	Ser	Asn	Ala	Ala	Gly	Val	Met	His	Tyr	Leu	Ile	
				440					445					450	
Arg	Val	Glu	Pro	Phe	Thr	Ser	Leu	His	Val	Gln	Leu	Gln	Ser	Gly	
				455					460					465	
Arg	Phe	Asp	Cys	Ser	Asp	Arg	Gln	Phe	His	Ser	Val	Ala	Ala	Ala	
				470					475					480	
Trp	Gln	Ala	Arg	Leu	Glu	Ser	Pro	Ala	Asp	Val	Lys	Glu	Leu	Ile	
				485					490					495	
Pro	Glu	Phe	Phe	Tyr	Phe	Pro	Asp	Phe	Leu	Glu	Asn	Gln	Asn	Gly	
				500					505					510	
Phe	Asp	Leu	Gly	Cys	Leu	Gln	Leu	Thr	Asn	Glu	Lys	Val	Gly	Asp	
				515					520					525	
Val	Val	Leu	Pro	Pro	Trp	Ala	Ser	Ser	Pro	Glu	Asp	Phe	Ile	Gln	
				530					535					540	
Gln	His	Arg	Gln	Ala	Leu	Glu	Ser	Glu	Tyr	Val	Ser	Ala	His	Leu	
				545					550					555	
His	Glu	Trp	Ile	Asp	Leu	Ile	Phe	Gly	Tyr	Lys	Gln	Arg	Gly	Pro	
				560					565					570	
Ala	Ala	Glu	Glu	Ala	Leu	Asn	Val	Phe	Tyr	Tyr	Cys	Thr	Tyr	Glu	
				575					580					585	

Gly	Ala	Val	Asp	Leu	Asp	His	Val	Thr	Asp	Glu	Arg	Glu	Arg	Lys	
				590					595					600	
Ala	Leu	Glu	Gly	Ile	Ile	Ser	Asn	Phe	Gly	Gln	Thr	Pro	Cys	Gln	
				605					610					615	
Leu	Leu	Lys	Glu	Pro	His	Pro	Thr	Arg	Leu	Ser	Ala	Glu	Glu	Ala	
				620					625					630	
Ala	His	Arg	Leu	Ala	Arg	Leu	Asp	Thr	Asn	Ser	Pro	Ser	Ile	Phe	
				635					640					645	
Gln	His	Leu	Asp	Glu	Leu	Lys	Ala	Phe	Phe	Ala	Glu	Val	Thr	Val	
				650					655					660	
Ser	Ala	Ser	Gly	Leu	Leu	Gly	Thr	His	Ser	Trp	Leu	Pro	Tyr	Asp	
				665					670					675	
Arg	Asn	Ile	Ser	Asn	Tyr	Phe	Ser	Phe	Ser	Lys	Asp	Pro	Thr	Met	
				680					685					690	
Gly	Ser	His	Lys	Thr	Gln	Arg	Leu	Leu	Ser	Gly	Pro	Trp	Val	Pro	
				695					700					705	
Gly	Ser	Gly	Val	Ser	Gly	Gln	Ala	Leu	Ala	Val	Ala	Pro	Asp	Gly	
				710					715					720	
Lys	Leu	Leu	Phe	Ser	Gly	Gly	His	Trp	Asp	Gly	Ser	Leu	Arg	Val	
				725					730					735	
Thr	Ala	Leu	Pro	Arg	Gly	Lys	Leu	Leu	Ser	Gln	Leu	Ser	Cys	His	
				740					745					750	
Leu	Asp	Val	Val	Thr	Cys	Leu	Ala	Leu	Asp	Thr	Cys	Gly	Ile	Tyr	
				755					760					765	
Leu	Ile	Ser	Gly	Ser	Arg	Asp	Thr	Thr	Cys	Met	Val	Trp	Arg	Leu	
				770					775					780	
Leu	His	Gln	Gly	Gly	Leu	Ser	Val	Gly	Leu	Ala	Pro	Lys	Pro	Val	
				785					790					795	
Gln	Val	Leu	Tyr	Gly	His	Gly	Ala	Ala	Val	Ser	Cys	Val	Ala	Ile	
				800					805					810	
Ser	Thr	Glu	Leu	Asp	Met	Ala	Val	Ser	Gly	Ser	Glu	Asp	Gly	Thr	
				815					820					825	
Val	Ile	Ile	His	Thr	Val	Arg	Arg	Gly	Gln	Phe	Val	Ala	Ala	Leu	
				830					835					840	
Arg	Pro	Leu	Gly	Ala	Thr	Phe	Pro	Gly	Pro	Ile	Phe	His	Leu	Ala	
				845					850					855	
Leu	Gly	Ser	Glu	Gly	Gln	Ile	Val	Val	Gln	Ser	Ser	Ala	Trp	Glu	
				860					865					870	
Arg	Pro	Gly	Ala	Gln	Val	Thr	Tyr	Ser	Leu	His	Leu	Tyr	Ser	Val	
				875					880					885	
Asn	Gly	Lys	Leu	Arg	Ala	Ser	Leu	Pro	Leu	Ala	Glu	Gln	Pro	Thr	
				890					895					900	

Ala	Leu	Thr	Val	Thr	Glu	Asp	Phe	Val	Leu	Leu	Gly	Thr	Ala	Gln
				905					910					915
Cys	Ala	Leu	His	Ile	Leu	Gln	Leu	Asn	Thr	Leu	Leu	Pro	Ala	Ala
				920					925					930
Pro	Pro	Leu	Pro	Met	Lys	Val	Ala	Ile	Arg	Ser	Val	Ala	Val	Thr
				935					940					945
Lys	Glu	Arg	Ser	His	Val	Leu	Val	Gly	Leu	Glu	Asp	Gly	Lys	Leu
				950					955					960
Ile	Val	Val	Val	Ala	Gly	Gln	Pro	Ser	Glu	Val	Arg	Ser	Ser	Gln
				965					970					975
Phe	Ala	Arg	Lys	Leu	Trp	Arg	Ser	Ser	Arg	Arg	Ile	Ser	Gln	Val
				980					985					990
Ser	Ser	Gly	Glu	Thr	Glu	Tyr	Asn	Pro	Thr	Glu	Ala	Arg		
				995					1000					

<210> 34
 <211> 43
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 34
 tgactgcact accccgtggc aagctgttga gccagctcag ctg 43

<210> 35
 <211> 1395
 <212> DNA
 <213> Homo sapiens

<400> 35
 cggacgcgtg ggcggacgcg tgggggctgt gagaaagtgc caataaatac 50
 atcatgcaac cccacggccc accttgtgaa ctctctgtgc ccagggctga 100
 tgtgctctt ccagggctac tcatccaaag gcctaatacca acgttctgtc 150
 ttcaatctgc aaatctatgg ggtcctgggg ctcttctgga cccttaactg 200
 ggtactggcc ctgggccaat gcgtcctcgc tggagccttt gcctccttct 250
 actgggcctt ccacaagccc caggacatcc ctaccttccc cttaatctct 300
 gccttcatcc gcacactccg ttaccacact gggtcattgg catttgagac 350
 cctcatcctg acccttgtgc agatagcccc ggtcatcttg gagtatattg 400
 accacaagct cagaggagtg cagaaccctg tagcccgcgtg catcatgtgc 450
 tgtttcaagt gctgcctctg gtgtctggaa aaatttatca agttcctaaa 500
 ccgcaatgca tacatcatga tcgccatcta cggaagaat ttctgtgtct 550
 cagccaaaaa tgcgttcatg ctactcatgc gaaacattgt cagggtggtc 600
 gtcttgga aagtcacaga cctgctgctg ttctttggga agctgctggc 650

ggtcggagggc gtgggggtcc tgtccttctt ttttttctcc ggtcgcatcc 700
 cggggctggg taaagacttt aagagccccc acctcaacta ttactggctg 750
 cccatcatga cctccatcct gggggcctat gtcatogcca gcggcttctt 800
 cagcgttttc ggcatgtgtg tggacacgct cttoctctgc ttcttggaag 850
 acctggagcg gaacaacggc tccctggacc ggccctacta catgtccaag 900
 agcctttctaa agattctggg caagaagaac gagggcgccc cggaacaaca 950
 gaagaggaag aagtgcacgc tccggccctg atccaggact gcaccccacc 1000
 cccaccgtcc agccatccaa cctcacttcg ccttacagggt ctccattttg 1050
 tggtaaaaaa aggttttagg ccaggcgccg tggctcacgc ctgtaatcca 1100
 acactttgag aggtgagggc gggcggtatca cctgagtcag gaggttcgaga 1150
 ccagcctggc caacatgggtg aaacctccgt ctctattaaa aatacaaaaa 1200
 ttagccgaga gtggtggcat gcacctgtca tcccagctac tcgggagggt 1250
 gaggcaggag aatcgcttga acccgggagg cagaggttgc agtgagccga 1300
 gatcgcgcca ctgcactcca acctgggtga cagactctgt ctccaaaaca 1350
 aaacaaacaa acaaaaagat tttattaaag atattttggt aactc 1395

<210> 36
 <211> 321
 <212> PRT
 <213> Homo sapiens

<400> 36
 Arg Thr Arg Gly Arg Thr Arg Gly Gly Cys Glu Lys Val Pro Ile
 1 5 10 15
 Asn Thr Ser Cys Asn Pro Thr Ala His Leu Val Asn Ser Ser Cys
 20 25 30
 Pro Gly Leu Met Cys Val Phe Gln Gly Tyr Ser Ser Lys Gly Leu
 35 40 45
 Ile Gln Arg Ser Val Phe Asn Leu Gln Ile Tyr Gly Val Leu Gly
 50 55 60
 Leu Phe Trp Thr Leu Asn Trp Val Leu Ala Leu Gly Gln Cys Val
 65 70 75
 Leu Ala Gly Ala Phe Ala Ser Phe Tyr Trp Ala Phe His Lys Pro
 80 85 90
 Gln Asp Ile Pro Thr Phe Pro Leu Ile Ser Ala Phe Ile Arg Thr
 95 100 105
 Leu Arg Tyr His Thr Gly Ser Leu Ala Phe Gly Ala Leu Ile Leu
 110 115 120
 Thr Leu Val Gln Ile Ala Arg Val Ile Leu Glu Tyr Ile Asp His
 125 130 135

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 39
ggcctaattcc aacgtttctgt cttcaatctg caaatctatg gggtcctggg 50

<210> 40
<211> 1365
<212> DNA
<213> Homo sapiens

<400> 40
gagtcttgac cgccgccggg ctcttggtac ctacagcgga gcgccaggcg 50
tccggccgcc gtggctatgt tcgtgtccga tttccgcaaa gagttctacg 100
agggtgtcca gagccagagg gtccttctct tcgtggcctc ggacgtggat 150
gctctgtgtg cgtgcaagat ccttcaggcc ttgttccagt gtgaccacgt 200
gcaatatacg ctggttccag tttctgggtg gcaagaactt gaaactgcat 250
ttcttgagca taaagaacag tttcattatt ttatttctcat aaactgtgga 300
gctaatttag acctattgga tattcttcaa cctgatgaag aactatatt 350
ctttgtgtgt gactcccata ggccagtcaa tgtcgtcaat gtatacaacg 400
ataccagat caaattactc attaaacaag atgatgacct tgaagttccc 450
gcctatgaag acatcttcag ggatgaagag gaggatgaag agcattcagg 500
aaatgacagt gatgggtcag agccttctga gaagcgaca cggttagaag 550
aggagatagt ggagcaaacc atgcggagga ggcagcggcg agagtgggag 600
gcccggagaa gagacatcct ctttgactac gagcagtatg aatatcatgg 650
gacatcgtca gccatgggtga tgtttgagct ggcttggatg ctgtccaagg 700
acctgaatga catgctgtgg tgggccatcg ttggactaac agaccagtgg 750
gtgcaagaca agatcactca aatgaaatac gtgactgatg ttggtgtcct 800
gcagcgccac gtttcccgcc acaaccaccg gaacgaggat gaggagaaca 850
cactctccgt ggactgcaca cggatctcct ttgagtatga cctccgctg 900
gtgctctacc agcactggtc cctocatgac agcctgtgca acaccagcta 950
taccgcagcc aggttcaagc tgtggtctgt gcatggacag aagcggctcc 1000
aggagttcct tgcagacatg ggtcttcccc tgaagcaggt gaagcagaag 1050
ttccaggcca tggacatctc cttgaaggag aatttgcgga aaatgattga 1100
agagtctgca aataaatttg ggatgaagga catgcgcgtg cagactttca 1150
gcattcattt tgggttcaag cacaagtttc tggccagcga cgtggtcttt 1200

gccaccatgt ctttgatgga gagccccgag aaggatggct cagggacaga 1250
 tcacttcate caggctctgg acagcctctc caggagtaac ctggacaagc 1300
 tgtaccatgg cctggaactc gccaagaagc agctgcgagc caccacagcag 1350
 accattgccca gctgc 1365

<210> 41
 <211> 566
 <212> PRT
 <213> Homo sapiens

<400> 41
 Met Phe Val Ser Asp Phe Arg Lys Glu Phe Tyr Glu Val Val Gln
 1 5 10 15
 Ser Gln Arg Val Leu Leu Phe Val Ala Ser Asp Val Asp Ala Leu
 20 25 30
 Cys Ala Cys Lys Ile Leu Gln Ala Leu Phe Gln Cys Asp His Val
 35 40 45
 Gln Tyr Thr Leu Val Pro Val Ser Gly Trp Gln Glu Leu Glu Thr
 50 55 60
 Ala Phe Leu Glu His Lys Glu Gln Phe His Tyr Phe Ile Leu Ile
 65 70 75
 Asn Cys Gly Ala Asn Val Asp Leu Leu Asp Ile Leu Gln Pro Asp
 80 85 90
 Glu Asp Thr Ile Phe Phe Val Cys Asp Ser His Arg Pro Val Asn
 95 100 105
 Val Val Asn Val Tyr Asn Asp Thr Gln Ile Lys Leu Leu Ile Lys
 110 115 120
 Gln Asp Asp Asp Leu Glu Val Pro Ala Tyr Glu Asp Ile Phe Arg
 125 130 135
 Asp Glu Glu Glu Asp Glu Glu His Ser Gly Asn Asp Ser Asp Gly
 140 145 150
 Ser Glu Pro Ser Glu Lys Arg Thr Arg Leu Glu Glu Glu Ile Val
 155 160 165
 Glu Gln Thr Met Arg Arg Arg Gln Arg Arg Glu Trp Glu Ala Arg
 170 175 180
 Arg Arg Asp Ile Leu Phe Asp Tyr Glu Gln Tyr Glu Tyr His Gly
 185 190 195
 Thr Ser Ser Ala Met Val Met Phe Glu Leu Ala Trp Met Leu Ser
 200 205 210
 Lys Asp Leu Asn Asp Met Leu Trp Trp Ala Ile Val Gly Leu Thr
 215 220 225
 Asp Gln Trp Val Gln Asp Lys Ile Thr Gln Met Lys Tyr Val Thr
 230 235 240
 Asp Val Gly Val Leu Gln Arg His Val Ser Arg His Asn His Arg


```
<210> 42
<211> 380
<212> DNA
<213> Homo sapiens
```

```
<220>  
<221> unsure  
<222> 44, 118, 172, 183  
<223> unknown base
```

```
<400> 42
gtacctcagc gcgagcgcca ggcgtccggc cgccgtggct atgntcgtgt 50
ccgatttcgc caaagagttc tacgaggtgg tccagagcca gagggtcctt 100
ctcttcgtgg cctcggangt ggatgctctg tgtgcgtgca agatccttca 150
ggccttggtc cagtgtgacc angtgcaata tangctgggt ccagtttctg 200
ggtggcaaga acttgaaact gcatttcttg agcataaaga acagtttcat 250
tattttattc tcataaactg tggagctaata gtagacctat tggatatattct 300
tcaacctgat gaagacacta tattctttgt gtgtgacacc cataggccag 350
tcaatgttgt caatgtatac aacgataccc 380
```

```
<210> 43
<211> 25
<212> DNA
<213> Artificial Sequence
```

<220>
<223> Synthetic oligonucleotide probe

```
<400> 43
  ttccgcaaag agttctacga ggtgg 25
```

```
<210> 44
<211> 26
<212> DNA
<213> Artificial Sequence
```

<220>
<223> Synthetic oligonucleotide probe

```
<400> 44
attgacaaca ttgactggcc tatggg 26
```

```
<210> 45
<211> 50
<212> DNA
<213> Artificial Sequence
```

<220>
<223> Synthetic oligonucleotide probe

<400> 45
gtggatgctc tgtgtgcgtg caagatcctt caggccttgt tccagtgtga 50

<210> 46

<211> 3089
<212> DNA
<213> Homo sapiens

<400> 46

caggaaccct ctctttgggt ctggattggg acccctttcc agtaccattt 50
tttctagtga accacgaagg gacgatacca gaaaacaocc tcaacccaaa 100
ggaaatagac tacagcccca attggctgac tttggctata gaaaaaagaa 150
aggaacgaaa agagacagtt ttttttggaa agctaagtct tccctttatc 200
gagtcaagaa accccccctt cttgagctat ttacagcttt taacaattga 250
gtaaagtacg ctccggtcac catggtgaca gccgccctgg gtcccgtctg 300
ggcagcgtc ctgctctttc tcctgatgtg tgagatccgt atggtggagc 350
tcacctttga cagagctgtg gccagcggct gccaacggtg ctgtgactct 400
gaggaccccc tggatcctgc ccatgtatcc tcagcctctt cctccggccg 450
ccccacgcc ctgcctgaga tcagacccta cattaatatc accatcctga 500
agggtgacaa aggggaccca ggcccaatgg gcctgccagg gtacatgggc 550
agggagggtc cccaaggga gcctggccct cagggcagca agggtgacaa 600
gggggagatg ggcagccccg gcgccccgtg ccagaagcgc ttcttcgct 650
tctcagtggg ccgcaagacg gccctgcaca gcggcgagga cttccagacg 700
ctgctcttcg aaagggtctt tgtgaacctt gatgggtgct ttgacatggc 750
gaccggccag tttgctgctc ccctgcgtgg catctacttc ttcagcctca 800
atgtgcacag ctggaattac aaggagacgt acgtgcacat tatgcataac 850
cagaaagagg ctgtcatcct gtacgcgcag ccagcgcagc gcagcatcat 900
gcagagccag agtgtgatgc tggacctggc ctacggggac cgcgtctggg 950
tgcggtctct caagcgccag cgcgagaacg ccatctacag caacgacttc 1000
gacacctaca tcaccttcag cggccacctc atcaaggccg aggacgactg 1050
agggcctctg ggccaccctc ccggtctggag agctcaggtg ctggtcccgt 1100
cccctgcagg gctcagtttg cactgctgtg aagcaggaag gccagggagg 1150
tccccgggga cctggcattc tggggagacc ctgcttctat cttggctgcc 1200
atcatccctc ccagcctatt tctgctcctc tcttctctct tggacctatt 1250
ttaagaagct tgctaacct aatattctag aactttccca gcctcgtagc 1300
ccagcacttc tcaaacttgg aaatgcatgc gaatcaccg gggttcgtgt 1350
taaatgcaga ttctgactca gcaggtctga gtgggtccag gattctgtgt 1400
ttctcatatg ttctgggtg atgctgatgg ggtcagtcta tgaaccacac 1450

taaagaatgc tgtctcctct tggaaaaaaaa aaaaaaaaa 3089

<210> 47

<211> 259

<212> PRT

<213> Homo sapiens

<220>

<221> Signal Peptide

<222> 1-20

<223> Signal Peptide

<220>

<221> N-glycosylation Site

<222> 72-75

<223> N-glycosylation Site

<220>

<221> Clq Domain Proteins

<222> 144-178, 78-111, 84-117

<223> Clq Domain Proteins

<400> 47

Met Val Thr Ala Ala Leu Gly Pro Val Trp Ala Ala Leu Leu Leu
1 5 10 15

Phe Leu Leu Met Cys Glu Ile Arg Met Val Glu Leu Thr Phe Asp
20 25 30

Arg Ala Val Ala Ser Gly Cys Gln Arg Cys Cys Asp Ser Glu Asp
35 40 45

Pro Leu Asp Pro Ala His Val Ser Ser Ala Ser Ser Ser Gly Arg
50 55 60

Pro His Ala Leu Pro Glu Ile Arg Pro Tyr Ile Asn Ile Thr Ile
65 70 75

Leu Lys Gly Asp Lys Gly Asp Pro Gly Pro Met Gly Leu Pro Gly
80 85 90

Tyr Met Gly Arg Glu Gly Pro Gln Gly Glu Pro Gly Pro Gln Gly
95 100 105

Ser Lys Gly Asp Lys Gly Glu Met Gly Ser Pro Gly Ala Pro Cys
110 115 120

Gln Lys Arg Phe Phe Ala Phe Ser Val Gly Arg Lys Thr Ala Leu
125 130 135

His Ser Gly Glu Asp Phe Gln Thr Leu Leu Phe Glu Arg Val Phe
140 145 150

Val Asn Leu Asp Gly Cys Phe Asp Met Ala Thr Gly Gln Phe Ala
155 160 165

Ala Pro Leu Arg Gly Ile Tyr Phe Phe Ser Leu Asn Val His Ser
170 175 180

Trp Asn Tyr Lys Glu Thr Tyr Val His Ile Met His Asn Gln Lys
185 190 195

Glu Ala Val Ile Leu Tyr Ala Gln Pro Ser Glu Arg Ser Ile Met

	200	205	210
Gln Ser Gln Ser	Val Met Leu Asp Leu	Ala Tyr Gly Asp Arg	Val
	215	220	225
Trp Val Arg Leu	Phe Lys Arg Gln Arg	Glu Asn Ala Ile Tyr	Ser
	230	235	240
Asn Asp Phe Asp	Thr Tyr Ile Thr Phe	Ser Gly His Leu Ile	Lys
	245	250	255
Ala Glu Asp Asp			

<210> 48
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 48
 ccagacgctg ctcttcgaaa gggtc 25

<210> 49
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 49
 ggtccccgta ggccaggtcc agc 23

<210> 50
 <211> 50
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 50
 ctacttcttc agcctcaatg tgcacagctg gaattacaag gagacgtacg 50

<210> 51
 <211> 2768
 <212> DNA
 <213> Homo sapiens

<400> 51
 actcgaacgc agttgcttcg ggacccagga cccctcggg cccgacccgc 50
 caggaaagac tgaggccgcg gcctgccccg cccggctccc tgcgccgccg 100
 ccgcctcccg ggacagaaga tgtgctccag ggtccctctg ctgctgccgc 150
 tgctcctgct actggccctg gggcctgggg tgcagggctg cccatccggc 200
 tgccagtgca gccagccaca gacagtcttc tgcactgcc gccaggggac 250

cacggtgccc cgagacgtgc cacccgacac ggtggggctg tacgtctttg 300
 agaacggcat caccatgctc gacgcaggca gctttgccgg cctgccgggc 350
 ctgcagctcc tggacctgtc acagaaccag atcgccagcc tgcccagcgg 400
 ggtcttccag ccactcgcca acctcagcaa cctggacctg acggccaaca 450
 ggctgcatga aatcaccaat gagaccttcc gtggcctgcg gcgcctcgag 500
 cgcctctacc tgggcaagaa ccgcatccgc cacatccagc ctggtgcctt 550
 cgacacgctc gaccgcctcc tggagctcaa gctgcaggac aacgagctgc 600
 gggcactgcc cccgctgcgc ctgccccgcc tgetgctgct ggacctcagc 650
 cacaacagcc tcctggccct ggagcccggc atcctggaca ctgccaacgt 700
 ggaggcgctg cggctggctg gtctggggct gcagcagctg gacgaggggc 750
 tcttcagccg cttgcgcaac ctccacgacc tggatgtgtc cgacaaccag 800
 ctggagcgag tgccacctgt gatccgaggc ctccggggcc tgacgcgcct 850
 gcggctggcc ggcaacaccc gcattgccca gctgcggccc gaggacctgg 900
 ccggcctggc tgccctgcag gagctggatg tgagcaacct aagcctgcag 950
 gccctgcctg gcgacctctc gggcctcttc ccccgccctg ggctgctggc 1000
 agctgcccgc aacccttca actgcgtgtg cccctgagc tggtttggcc 1050
 cctgggtgcg cgagagccac gtcacactgg ccagccctga ggagacgcgc 1100
 tgccacttcc cgccaagaa cgttgccgg ctgctcctgg agcttgacta 1150
 cgccgacttt ggctgcccag ccaccaccac cacagccaca gtgcccacca 1200
 cgaggcccgt ggtgcgggag cccacagcct tgtcttctag cttggctcct 1250
 acctggctta gcccacagc gccggccact gaggccccc gcccgcctc 1300
 cactgcccga ccgactgtag ggcctgtccc ccagcccag gactgcccac 1350
 cgtccacctg cctcaatggg ggcacatgcc acctggggac acggcaccac 1400
 ctggcgctgt tgtgccccga aggccttcacg ggccgtgtact gtgagagcca 1450
 gatggggcag gggacacggc ccagccctac accagtcacg ccgaggccac 1500
 cacggtccct gaccctgggc atcgagccgg tgagccccc ctccctgcgc 1550
 gtggggctgc agcgctacct ccaggggagc tccgtgcagc tcaggagcct 1600
 ccgtctcacc tatcgcaacc tatcggggcc tgataagcgg ctggtgacgc 1650
 tgcgactgcc tgcctcgctc gctgagtaca cggtcaccca gctgcggccc 1700
 aacgccactt actccgtctg tgtcatgcct ttggggcccg ggcgggtgcc 1750
 ggaggcgag gaggcctgcg gggaggccca tacaccccca gccgtccact 1800
 ccaaccacgc ccagtcacc caggcccgcg agggcaacct gccgtcctc 1850

attgcgcocg ccctggccgc ggtgctcctg gccgcgctgg ctgcggtggg 1900
 ggcagcctac tgtgtgcggc gggggcgggc catggcagca gcggctcagg 1950
 acaaagggca ggtggggcca ggggctgggc ccctggaact ggagggagtg 2000
 aaggtcccct tggagccagg cccgaaggca acagagggcg gtggagaggc 2050
 cctgcccagc ggggtctgagt gtgaggtgcc actcatgggc ttcccagggc 2100
 ctggcctcca gtcaccctc cacgcaaagc cctacatcta agccagagag 2150
 agacagggca gctggggccg ggctctcagc cagtgaatg gccagcccc 2200
 tctgtctgcc acaccagta agttctcagt cccaacctcg gggatgtgtg 2250
 cagacagggc tgtgtgacca cagctgggccc ctgttcctc tggacctcg 2300
 tctctcatc tgtgagatgc tgtggcccag ctgacgagcc ctaacgtccc 2350
 cagaaccgag tgcctatgag gacagtgtcc gccctgccct ccgcaacgtg 2400
 cagtccctgg gcacggcggg ccctgccatg tgctggtaac gcatgcctgg 2450
 gtctgtctgg gctctccac tccaggcggg ccctgggggc cagtgaagga 2500
 agtcccggg aagagcagag ggagagcggg taggcggctg tgtgactcta 2550
 gtcttgccc caggaagcga aggaacaaaa gaaactggaa aggaagatgc 2600
 ttttaggaaca tgttttgctt ttttaaaata tatatatata taagatatcc 2650
 tttccattt attctgggaa gatgtttttc aaactcagag acaaggactt 2700
 tggtttttgt aagacaaacg atgatatgaa ggccttttgt aagaaaaaat 2750
 aaaagatgaa gtgtgaaa 2768

<210> 52
 <211> 673
 <212> PRT
 <213> Homo sapiens

<400> 52
 Met Cys Ser Arg Val Pro Leu Leu Leu Pro Leu Leu Leu Leu Leu
 1 5 10 15
 Ala Leu Gly Pro Gly Val Gln Gly Cys Pro Ser Gly Cys Gln Cys
 20 25 30
 Ser Gln Pro Gln Thr Val Phe Cys Thr Ala Arg Gln Gly Thr Thr
 35 40 45
 Val Pro Arg Asp Val Pro Pro Asp Thr Val Gly Leu Tyr Val Phe
 50 55 60
 Glu Asn Gly Ile Thr Met Leu Asp Ala Gly Ser Phe Ala Gly Leu
 65 70 75
 Pro Gly Leu Gln Leu Leu Asp Leu Ser Gln Asn Gln Ile Ala Ser
 80 85 90
 Leu Pro Ser Gly Val Phe Gln Pro Leu Ala Asn Leu Ser Asn Leu

	95	100	105
Asp Leu Thr Ala	Asn Arg Leu His Glu	Ile Thr Asn Glu Thr	Phe
	110	115	120
Arg Gly Leu Arg	Arg Leu Glu Arg Leu	Tyr Leu Gly Lys Asn	Arg
	125	130	135
Ile Arg His Ile	Gln Pro Gly Ala Phe	Asp Thr Leu Asp Arg	Leu
	140	145	150
Leu Glu Leu Lys	Leu Gln Asp Asn Glu	Leu Arg Ala Leu Pro	Pro
	155	160	165
Leu Arg Leu Pro	Arg Leu Leu Leu Leu	Asp Leu Ser His Asn	Ser
	170	175	180
Leu Leu Ala Leu	Glu Pro Gly Ile Leu	Asp Thr Ala Asn Val	Glu
	185	190	195
Ala Leu Arg Leu	Ala Gly Leu Gly Leu	Gln Gln Leu Asp Glu	Gly
	200	205	210
Leu Phe Ser Arg	Leu Arg Asn Leu His	Asp Leu Asp Val Ser	Asp
	215	220	225
Asn Gln Leu Glu	Arg Val Pro Pro Val	Ile Arg Gly Leu Arg	Gly
	230	235	240
Leu Thr Arg Leu	Arg Leu Ala Gly Asn	Thr Arg Ile Ala Gln	Leu
	245	250	255
Arg Pro Glu Asp	Leu Ala Gly Leu Ala	Ala Leu Gln Glu Leu	Asp
	260	265	270
Val Ser Asn Leu	Ser Leu Gln Ala Leu	Pro Gly Asp Leu Ser	Gly
	275	280	285
Leu Phe Pro Arg	Leu Arg Leu Leu Ala	Ala Ala Arg Asn Pro	Phe
	290	295	300
Asn Cys Val Cys	Pro Leu Ser Trp Phe	Gly Pro Trp Val Arg	Glu
	305	310	315
Ser His Val Thr	Leu Ala Ser Pro Glu	Glu Thr Arg Cys His	Phe
	320	325	330
Pro Pro Lys Asn	Ala Gly Arg Leu Leu	Leu Glu Leu Asp Tyr	Ala
	335	340	345
Asp Phe Gly Cys	Pro Ala Thr Thr Thr	Thr Ala Thr Val Pro	Thr
	350	355	360
Thr Arg Pro Val	Val Arg Glu Pro Thr	Ala Leu Ser Ser Ser	Leu
	365	370	375
Ala Pro Thr Trp	Leu Ser Pro Thr Ala	Pro Ala Thr Glu Ala	Pro
	380	385	390
Ser Pro Pro Ser	Thr Ala Pro Pro Thr	Val Gly Pro Val Pro	Gln
	395	400	405
Pro Gln Asp Cys	Pro Pro Ser Thr Cys	Leu Asn Gly Gly Thr	Cys

410	415	420
His Leu Gly Thr Arg 425	His His Leu Ala Cys 430	Leu Cys Pro Glu Gly 435
Phe Thr Gly Leu Tyr 440	Cys Glu Ser Gln Met 445	Gly Gln Gly Thr Arg 450
Pro Ser Pro Thr 455	Pro Val Thr Pro Arg 460	Pro Arg Ser Leu Thr 465
Leu Gly Ile Glu 470	Pro Val Ser Pro Thr 475	Ser Leu Arg Val Gly Leu 480
Gln Arg Tyr Leu 485	Gln Gly Ser Ser Val 490	Gln Leu Arg Ser Leu Arg 495
Leu Thr Tyr Arg 500	Asn Leu Ser Gly Pro 505	Asp Lys Arg Leu Val Thr 510
Leu Arg Leu Pro 515	Ala Ser Leu Ala Glu 520	Tyr Thr Val Thr Gln Leu 525
Arg Pro Asn Ala 530	Thr Tyr Ser Val Cys 535	Val Met Pro Leu Gly Pro 540
Gly Arg Val Pro 545	Glu Gly Glu Glu Ala 550	Cys Gly Glu Ala His Thr 555
Pro Pro Ala Val 560	His Ser Asn His Ala 565	Pro Val Thr Gln Ala Arg 570
Glu Gly Asn Leu 575	Pro Leu Leu Ile Ala 580	Pro Ala Leu Ala Ala Val 585
Leu Leu Ala Ala 590	Leu Ala Ala Val Gly 595	Ala Ala Tyr Cys Val Arg 600
Arg Gly Arg Ala 605	Met Ala Ala Ala Ala 610	Gln Asp Lys Gly Gln Val 615
Gly Pro Gly Ala 620	Gly Pro Leu Glu Leu 625	Glu Gly Val Lys Val Pro 630
Leu Glu Pro Gly 635	Pro Lys Ala Thr Glu 640	Gly Gly Gly Glu Ala Leu 645
Pro Ser Gly Ser 650	Glu Cys Glu Val Pro 655	Leu Met Gly Phe Pro Gly 660
Pro Gly Leu Gln 665	Ser Pro Leu His Ala 670	Lys Pro Tyr Ile

<210> 53

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 53

tcttcagccg cttgcgcaac ctc 23

[illegible]

```
<400> 54
  ttgctcacat ccagctcctg cagg 24
```

<220>
<223> Synthetic oligonucleotide probe

```
<400> 55
  tggatgttgt ccagacaacc agctggagct gtatccgagg c 41
```

```
<210> 56
<211> 3462
<212> DNA
<213> Homo sapiens
```

56

aatttgtttg gcatacatca gtggaacact ttcagatccg aaatgtgact 950
tttgggtgga aggcttatct tgaccacaat tcatttgact actcaaatac 1000
tgtaatgaga actataaaat tggagcatgt acatttcaga gtgtttttaca 1050
ttcaacagga taaaatctat ttgcttttga ccaaaatgga catagaaaac 1100
ctgacaatat caaatgcaca aatgccacac atgcttttcc cgaattatcc 1150
tacgaaattc caatatttaa attttgccaa taatatctta acagacgagt 1200
tgtttaaaaag aactatccaa ctgcctcact tgaaaactct cattttgaat 1250
ggcaataaac tggagacact ttcttttagta agttgctttg ctaacaacac 1300
acccttggaa cacttggatc tgagtcaaaa tctattacaa cataaaaaatg 1350
atgaaaattg ctcatggcca gaaactgtgg tcaatatgaa tctgtcatac 1400
aataaattgt ctgattctgt cttcaggtgc ttgccccaaa gtattcaaat 1450
acttgacctt aataataacc aaatccaaac tgtacctaaa gagactattc 1500
atctgatggc cttacgagaa ctaaattattg catttaattt tctaactgat 1550
ctccctggat gcagtcattt cagtagactt tcagttctga acattgaaat 1600
gaacttcatt ctcagcccat ctctggattt tgttcagagc tgccaggaag 1650
ttaaaactct aaatgcggga agaaatccat tccggtgtac ctgtgaatta 1700
aaaaatttca ttcagcttga aacatattca gaggtcatga tggttggatg 1750
gtcagattca tacacctgtg aatacccttt aaacctaagg ggaactaggt 1800
taaaagacgt tcatctccac gaattatctt gcaacacagc tctgttgatt 1850
gtcaccattg tggttattat gctagttctg gggttggctg tggccttctg 1900
ctgtctccac tttgatctgc cctggtatct caggatgcta ggtcaatgca 1950
cacaaacatg gcacagggtt aggaaaacaa cccaagaaca actcaagaga 2000
aatgtccgat tccacgcatt tatttcatac agtgaacatg attctctgtg 2050
ggtgaagaat gaattgatcc ccaatctaga gaaggaagat ggttctatct 2100
tgatttgcct ttatgaaagc tactttgacc ctggcaaaag cattagttaa 2150
aatattgtaa gcttcattga gaaaagctat aagtcacatc ttgttttgtc 2200
tcccaacttt gtccagaatg agtgggtgcca ttatgaattc tactttgccc 2250
accacaatct cttccatgaa aattctgatc atataattct tatcttactg 2300
gaaccattc cattctattg cattcccacc aggtatcata aactgaaagc 2350
tctcctggaa aaaaaagcat acttggaatg gcccaaggat aggcgtaaat 2400
gtgggctttt ctgggcaaac cttcgagctg ctattaatgt taatgtatta 2450
gccaccagag aaatgtatga actgcagaca ttcacagagt taaatgaaga 2500

Thr	Phe	Glu	Phe	Asn	Lys	Glu	Leu	Arg	Tyr	Leu	Asp	Leu	Ser	Asn	
				95					100					105	
Asn	Arg	Leu	Lys	Ser	Val	Thr	Trp	Tyr	Leu	Leu	Ala	Gly	Leu	Arg	
				110					115					120	
Tyr	Leu	Asp	Leu	Ser	Phe	Asn	Asp	Phe	Asp	Thr	Met	Pro	Ile	Cys	
				125					130					135	
Glu	Glu	Ala	Gly	Asn	Met	Ser	His	Leu	Glu	Ile	Leu	Gly	Leu	Ser	
				140					145					150	
Gly	Ala	Lys	Ile	Gln	Lys	Ser	Asp	Phe	Gln	Lys	Ile	Ala	His	Leu	
				155					160					165	
His	Leu	Asn	Thr	Val	Phe	Leu	Gly	Phe	Arg	Thr	Leu	Pro	His	Tyr	
				170					175					180	
Glu	Glu	Gly	Ser	Leu	Pro	Ile	Leu	Asn	Thr	Thr	Lys	Leu	His	Ile	
				185					190					195	
Val	Leu	Pro	Met	Asp	Thr	Asn	Phe	Trp	Val	Leu	Leu	Arg	Asp	Gly	
				200					205					210	
Ile	Lys	Thr	Ser	Lys	Ile	Leu	Glu	Met	Thr	Asn	Ile	Asp	Gly	Lys	
				215					220					225	
Ser	Gln	Phe	Val	Ser	Tyr	Glu	Met	Gln	Arg	Asn	Leu	Ser	Leu	Glu	
				230					235					240	
Asn	Ala	Lys	Thr	Ser	Val	Leu	Leu	Leu	Asn	Lys	Val	Asp	Leu	Leu	
				245					250					255	
Trp	Asp	Asp	Leu	Phe	Leu	Ile	Leu	Gln	Phe	Val	Trp	His	Thr	Ser	
				260					265					270	
Val	Glu	His	Phe	Gln	Ile	Arg	Asn	Val	Thr	Phe	Gly	Gly	Lys	Ala	
				275					280					285	
Tyr	Leu	Asp	His	Asn	Ser	Phe	Asp	Tyr	Ser	Asn	Thr	Val	Met	Arg	
				290					295					300	
Thr	Ile	Lys	Leu	Glu	His	Val	His	Phe	Arg	Val	Phe	Tyr	Ile	Gln	
				305					310					315	
Gln	Asp	Lys	Ile	Tyr	Leu	Leu	Leu	Thr	Lys	Met	Asp	Ile	Glu	Asn	
				320					325					330	
Leu	Thr	Ile	Ser	Asn	Ala	Gln	Met	Pro	His	Met	Leu	Phe	Pro	Asn	
				335					340					345	
Tyr	Pro	Thr	Lys	Phe	Gln	Tyr	Leu	Asn	Phe	Ala	Asn	Asn	Ile	Leu	
				350					355					360	
Thr	Asp	Glu	Leu	Phe	Lys	Arg	Thr	Ile	Gln	Leu	Pro	His	Leu	Lys	
				365					370					375	
Thr	Leu	Ile	Leu	Asn	Gly	Asn	Lys	Leu	Glu	Thr	Leu	Ser	Leu	Val	
				380					385					390	
Ser	Cys	Phe	Ala	Asn	Asn	Thr	Pro	Leu	Glu	His	Leu	Asp	Leu	Ser	
				395					400					405	

Gln Asn Leu Leu	Gln His Lys Asn Asp	Glu Asn Cys Ser Trp Pro	410	415	420
Glu Thr Val Val	Asn Met Asn Leu Ser	Tyr Asn Lys Leu Ser Asp	425	430	435
Ser Val Phe Arg	Cys Leu Pro Lys Ser	Ile Gln Ile Leu Asp Leu	440	445	450
Asn Asn Asn Gln	Ile Gln Thr Val Pro	Lys Glu Thr Ile His Leu	455	460	465
Met Ala Leu Arg	Glu Leu Asn Ile Ala	Phe Asn Phe Leu Thr Asp	470	475	480
Leu Pro Gly Cys	Ser His Phe Ser Arg	Leu Ser Val Leu Asn Ile	485	490	495
Glu Met Asn Phe	Ile Leu Ser Pro Ser	Leu Asp Phe Val Gln Ser	500	505	510
Cys Gln Glu Val	Lys Thr Leu Asn Ala	Gly Arg Asn Pro Phe Arg	515	520	525
Cys Thr Cys Glu	Leu Lys Asn Phe Ile	Gln Leu Glu Thr Tyr Ser	530	535	540
Glu Val Met Met	Val Gly Trp Ser Asp	Ser Tyr Thr Cys Glu Tyr	545	550	555
Pro Leu Asn Leu	Arg Gly Thr Arg Leu	Lys Asp Val His Leu His	560	565	570
Glu Leu Ser Cys	Asn Thr Ala Leu Leu	Ile Val Thr Ile Val Val	575	580	585
Ile Met Leu Val	Leu Gly Leu Ala Val	Ala Phe Cys Cys Leu His	590	595	600
Phe Asp Leu Pro	Trp Tyr Leu Arg Met	Leu Gly Gln Cys Thr Gln	605	610	615
Thr Trp His Arg	Val Arg Lys Thr Thr	Gln Glu Gln Leu Lys Arg	620	625	630
Asn Val Arg Phe	His Ala Phe Ile Ser	Tyr Ser Glu His Asp Ser	635	640	645
Leu Trp Val Lys	Asn Glu Leu Ile Pro	Asn Leu Glu Lys Glu Asp	650	655	660
Gly Ser Ile Leu	Ile Cys Leu Tyr Glu	Ser Tyr Phe Asp Pro Gly	665	670	675
Lys Ser Ile Ser	Glu Asn Ile Val Ser	Phe Ile Glu Lys Ser Tyr	680	685	690
Lys Ser Ile Phe	Val Leu Ser Pro Asn	Phe Val Gln Asn Glu Trp	695	700	705
Cys His Tyr Glu	Phe Tyr Phe Ala His	His Asn Leu Phe His Glu	710	715	720

Asn	Ser	Asp	His	Ile	Ile	Leu	Ile	Leu	Leu	Glu	Pro	Ile	Pro	Phe
				725					730					735
Tyr	Cys	Ile	Pro	Thr	Arg	Tyr	His	Lys	Leu	Lys	Ala	Leu	Leu	Glu
				740					745					750
Lys	Lys	Ala	Tyr	Leu	Glu	Trp	Pro	Lys	Asp	Arg	Arg	Lys	Cys	Gly
				755					760					765
Leu	Phe	Trp	Ala	Asn	Leu	Arg	Ala	Ala	Ile	Asn	Val	Asn	Val	Leu
				770					775					780
Ala	Thr	Arg	Glu	Met	Tyr	Glu	Leu	Gln	Thr	Phe	Thr	Glu	Leu	Asn
				785					790					795
Glu	Glu	Ser	Arg	Gly	Ser	Thr	Ile	Ser	Leu	Met	Arg	Thr	Asp	Cys
				800					805					810

Leu

<210> 58
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 58
 tcccaccagg tatcataaac tgaa 24

<210> 59
 <211> 27
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 59
 ttatagacaa tctgttctca tcagaga 27

<210> 60
 <211> 40
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 60
 aaaaagcata cttggaatgg cccaaggata ggtgtaaatg 40

<210> 61
 <211> 3772
 <212> DNA
 <213> Homo sapiens

<400> 61
 gggggccttc ttgggcttgg ctgcttgga cacctgcctc caaggaccgg 50
 cctcggaggg gtcgccggga aaggaggga agaaggaagg gcggggccgg 100

cccccctgcg cccgccccgc gcctctgcmc gccccctgtcc gccccggccc 150
 agcccagccc agccccgcgg gccggtcaca cgcgcagcca gccggccgcc 200
 tccccgcgcc aagcgcgccg ctctgctgtg ccctgogccc ttgccccgcg 250
 ccagcttctg cgcgcgcagc ccgccccggc cccccgggtga ccgtgaccct 300
 gccctggggc cggggcgagg caggcatgtc ccgccccggg accgctaccc 350
 cagcgtggc cctggtgtc ctggcagtga ccctggccgg ggtcggagcc 400
 cagggcgag ccctcgagga ccctgattat tacgggcagg agatctggag 450
 ccgggagccc tactacgcgc gcccgagacc cgagctcgag accttctctc 500
 cgcgcgtgcc tgcggggccc ggggaggagt gggagcggcg cccgcaggag 550
 cccaggccgc ccaagaggcc caccaagccc aagaaagctc ccaagaggga 600
 gaagtggct ccggagccgc ctccaccagg taaacacagc aacaaaaaag 650
 ttatgagaac caagagctct gagaaggctg ccaacgatga tcacagtgtc 700
 cgtgtggccc gtgaagatgt cagagagagt tgcccacctc ttggtctgga 750
 aaccttaaaa atcacagact tccagctcca tgctccacg gtgaagcgtc 800
 atggcctggg ggcacatcga gggagactca acatccaggc gggcattaat 850
 gaaaatgatt tttatgacgg agcgtggtgc gcgggaagaa atgacctcca 900
 gcagtggatt gaagtggatg ctcggcgcct gaccagattc actggtgtca 950
 tcaactcaagg gaggaactcc ctctggctga gtgactgggt gacatcctat 1000
 aaggtcatgg tgagcaatga cagccacacg tgggtcactg ttaagaatgg 1050
 atctggagac atgatatttg agggaaacag tgagaaggag atccctgttc 1100
 tcaatgagct acccgtcccc atgggtggccc gctacatccg cataaaccct 1150
 cagtcctggt ttgataatgg gagcatctgc atgagaatgg agatcctggg 1200
 ctgcccactg ccagatccta ataattatta tcaccgccgg aacgagatga 1250
 ccaccactga tgacctggat ttttaagcacc acaattataa ggaaatgcgc 1300
 cagttgatga aagttgtgaa tgaaatgtgt cccaatatca ccagaattta 1350
 caacattgga aaaagccacc agggcctgaa gctgtatgct gtggagatct 1400
 cagatcacc tggggagcat gaagtcggtg agcccgagtt ccaactacatc 1450
 gcgggggccc acggcaatga ggtgctgggc cgggagctgc tgctgctgct 1500
 ggtgcagttc gtgtgtcagg agtacttggc ccggaatgcg cgcacgtcc 1550
 acctggtgga ggagacggg attcacgtcc tcccctccct caaccccgat 1600
 ggctacgaga aggcctacga agggggctcg gagctgggag gctggtccct 1650
 gggacgctgg acccacgatg gaattgacat caacaacaac tttcctgatt 1700

taaacacgct gctctgggag gcagaggatc gacagaatgt ccccaggaaa 1750
 gttcccaatc actatatgtc aatccctgag tggtttctgt cggaaaatgc 1800
 cacggtggct gccgagacca gagcagtcac agcctggatg gaaaaaatcc 1850
 cttttgtgct gggcggcaac ctgcagggcg gcgagctggt ggtggcgtat 1900
 ccctacgacc tggtgcggtc cccctggaag acgcaggaac acacccccac 1950
 ccccgatgac cacgtgttcc gctggctggc ctactcctat gcctccacac 2000
 accgcctcat gacagacgcc cggaggaggg tgtgccacac ggaggacttc 2050
 cagaaggagg agggcactgt caatggggcc tcctggcaca ccgtcgctgg 2100
 aagtctgaac gatttcagct accttcatac aaactgcttc gaactgtcca 2150
 tctacgtggg ctgtgataaa taccacatg agagccagct gcccgaggag 2200
 tgggagaata accgggaatc tctgatcgtg ttcattggagc aggttcacgc 2250
 tggcattaaa ggcttgggtg gagattcaca tggaaaagga atcccaaacg 2300
 ccattatctc cgtagaaggc attaacctatg acatccgaac agccaacgat 2350
 ggggattact ggcgcctcct gaaccctgga gagtatgtgg tcacagcaaa 2400
 ggccgaaggt ttcactgcat ccaccaagaa ctgtatggtt ggctatgaca 2450
 tggggggccac aaggtgtgac ttcacactta gcaaaaccaa catggccagg 2500
 atccgagaga tcatggagaa gtttggaag cagcccgtca gcctgccagc 2550
 caggcggctg aagctgcggg ggcggaagag acgacagcgt gggtgaccct 2600
 cctgggccct tgagactcgt ctgggaccca tgcaaattaa accaacctgg 2650
 tagtagctcc atagtggact cactcactgt tgtttcctct gtaattcaag 2700
 aagtgcctgg aagagagggt gcattgtgag gcagggtcca aaagggaagg 2750
 ctggaggctg aggctgtttt cttttctttg ttcccattha tccaaataac 2800
 ttggacagag cagcagagaa aagctgatgg gagtgagaga actcagcaag 2850
 ccaacctggg aatcagagag agaaggagaa ggaggggagc ctgtccgttc 2900
 agagcctctg gctgcataga aaaggattct ggtgcttccc ctgtttgcgt 2950
 ggcagcaagg gttccacgtg catttgcaat ttgcacagct aaaattgcag 3000
 catttcccca gctgggctgt cccaaatgtt accatttgag atgctcccag 3050
 gcgtcctaag agaatccacc ctctctggcc ctgggacatt gcaagctgct 3100
 acaaataaat tctgtgttct ttgacaata gcgtcattgc caagtgcaca 3150
 tcagtgagcc tcttgaatct gtttagtctc ctttttcaac aaaggagtgt 3200
 gttcagaaaa ggagagagag gctgagatca ttcaggagtt tgttgggcag 3250
 caagcatgga gcttcttgca caaattctgg gtccataaac aacccccaaa 3300

gtccctgctg atccagtagc cctggagggtt ccccaggtag ggagagccag 3350
 aggtgccagc cttcctgaag ggccagaaaa tttagcctgg atctcctctt 3400
 ttacctgcta ggactggaaa gagccagaag tggggtggcc tgaagccctc 3450
 tctctgcttg aggtattgcc cctgtgtgga attgagtgtc catggggttg 3500
 cctcatatca gcctgggagt tatttttgat atgtagaatg ccagatcttc 3550
 cagattaggc taaatgtaat gaaaacctct taggattatc tgtggagcat 3600
 cagtttggga agaattattg aattatcttg caagaaaaaa gtatgtctca 3650
 ctttttgta atgttgctgc ctcatcgacc tgggaaaaat gaaaaaaaaa 3700
 aataaagcaa atggtgaagac ccttaaaaaa aaaaaaaaaa aaaaaaaaaa 3750
 aaaaaaaaaa aaaaaaaaaa aa 3772

<210> 62
 <211> 756
 <212> PRT
 <213> Homo sapiens

<400> 62
 Met Ser Arg Pro Gly Thr Ala Thr Pro Ala Leu Ala Leu Val Leu
 1 5 10 15
 Leu Ala Val Thr Leu Ala Gly Val Gly Ala Gln Gly Ala Ala Leu
 20 25 30
 Glu Asp Pro Asp Tyr Tyr Gly Gln Glu Ile Trp Ser Arg Glu Pro
 35 40 45
 Tyr Tyr Ala Arg Pro Glu Pro Glu Leu Glu Thr Phe Ser Pro Pro
 50 55 60
 Leu Pro Ala Gly Pro Gly Glu Glu Trp Glu Arg Arg Pro Gln Glu
 65 70 75
 Pro Arg Pro Pro Lys Arg Ala Thr Lys Pro Lys Lys Ala Pro Lys
 80 85 90
 Arg Glu Lys Ser Ala Pro Glu Pro Pro Pro Pro Gly Lys His Ser
 95 100 105
 Asn Lys Lys Val Met Arg Thr Lys Ser Ser Glu Lys Ala Ala Asn
 110 115 120
 Asp Asp His Ser Val Arg Val Ala Arg Glu Asp Val Arg Glu Ser
 125 130 135
 Cys Pro Pro Leu Gly Leu Glu Thr Leu Lys Ile Thr Asp Phe Gln
 140 145 150
 Leu His Ala Ser Thr Val Lys Arg Tyr Gly Leu Gly Ala His Arg
 155 160 165
 Gly Arg Leu Asn Ile Gln Ala Gly Ile Asn Glu Asn Asp Phe Tyr
 170 175 180
 Asp Gly Ala Trp Cys Ala Gly Arg Asn Asp Leu Gln Gln Trp Ile

185										190				195					
Glu	Val	Asp	Ala	Arg	Arg	Leu	Thr	Arg	Phe	Thr	Gly	Val	Ile	Thr					
				200					205					210					
Gln	Gly	Arg	Asn	Ser	Leu	Trp	Leu	Ser	Asp	Trp	Val	Thr	Ser	Tyr					
				215					220					225					
Lys	Val	Met	Val	Ser	Asn	Asp	Ser	His	Thr	Trp	Val	Thr	Val	Lys					
				230					235					240					
Asn	Gly	Ser	Gly	Asp	Met	Ile	Phe	Glu	Gly	Asn	Ser	Glu	Lys	Glu					
				245					250					255					
Ile	Pro	Val	Leu	Asn	Glu	Leu	Pro	Val	Pro	Met	Val	Ala	Arg	Tyr					
				260					265					270					
Ile	Arg	Ile	Asn	Pro	Gln	Ser	Trp	Phe	Asp	Asn	Gly	Ser	Ile	Cys					
				275					280					285					
Met	Arg	Met	Glu	Ile	Leu	Gly	Cys	Pro	Leu	Pro	Asp	Pro	Asn	Asn					
				290					295					300					
Tyr	Tyr	His	Arg	Arg	Asn	Glu	Met	Thr	Thr	Thr	Asp	Asp	Leu	Asp					
				305					310					315					
Phe	Lys	His	His	Asn	Tyr	Lys	Glu	Met	Arg	Gln	Leu	Met	Lys	Val					
				320					325					330					
Val	Asn	Glu	Met	Cys	Pro	Asn	Ile	Thr	Arg	Ile	Tyr	Asn	Ile	Gly					
				335					340					345					
Lys	Ser	His	Gln	Gly	Leu	Lys	Leu	Tyr	Ala	Val	Glu	Ile	Ser	Asp					
				350					355					360					
His	Pro	Gly	Glu	His	Glu	Val	Gly	Glu	Pro	Glu	Phe	His	Tyr	Ile					
				365					370					375					
Ala	Gly	Ala	His	Gly	Asn	Glu	Val	Leu	Gly	Arg	Glu	Leu	Leu	Leu					
				380					385					390					
Leu	Leu	Val	Gln	Phe	Val	Cys	Gln	Glu	Tyr	Leu	Ala	Arg	Asn	Ala					
				395					400					405					
Arg	Ile	Val	His	Leu	Val	Glu	Glu	Thr	Arg	Ile	His	Val	Leu	Pro					
				410					415					420					
Ser	Leu	Asn	Pro	Asp	Gly	Tyr	Glu	Lys	Ala	Tyr	Glu	Gly	Gly	Ser					
				425					430					435					
Glu	Leu	Gly	Gly	Trp	Ser	Leu	Gly	Arg	Trp	Thr	His	Asp	Gly	Ile					
				440					445					450					
Asp	Ile	Asn	Asn	Asn	Phe	Pro	Asp	Leu	Asn	Thr	Leu	Leu	Trp	Glu					
				455					460					465					
Ala	Glu	Asp	Arg	Gln	Asn	Val	Pro	Arg	Lys	Val	Pro	Asn	His	Tyr					
				470					475					480					
Ile	Ala	Ile	Pro	Glu	Trp	Phe	Leu	Ser	Glu	Asn	Ala	Thr	Val	Ala					
				485					490					495					
Ala	Glu	Thr	Arg	Ala	Val	Ile	Ala	Trp	Met	Glu	Lys	Ile	Pro	Phe					

500	505	510
Val Leu Gly Gly Asn Leu Gln Gly Gly	Glu Leu Val Val Ala Tyr	
515	520	525
Pro Tyr Asp Leu Val Arg Ser Pro Trp	Lys Thr Gln Glu His Thr	
530	535	540
Pro Thr Pro Asp Asp His Val Phe Arg	Trp Leu Ala Tyr Ser Tyr	
545	550	555
Ala Ser Thr His Arg Leu Met Thr Asp	Ala Arg Arg Arg Val Cys	
560	565	570
His Thr Glu Asp Phe Gln Lys Glu Glu	Gly Thr Val Asn Gly Ala	
575	580	585
Ser Trp His Thr Val Ala Gly Ser Leu	Asn Asp Phe Ser Tyr Leu	
590	595	600
His Thr Asn Cys Phe Glu Leu Ser Ile	Tyr Val Gly Cys Asp Lys	
605	610	615
Tyr Pro His Glu Ser Gln Leu Pro Glu	Glu Trp Glu Asn Asn Arg	
620	625	630
Glu Ser Leu Ile Val Phe Met Glu Gln	Val His Arg Gly Ile Lys	
635	640	645
Gly Leu Val Arg Asp Ser His Gly Lys	Gly Ile Pro Asn Ala Ile	
650	655	660
Ile Ser Val Glu Gly Ile Asn His Asp	Ile Arg Thr Ala Asn Asp	
665	670	675
Gly Asp Tyr Trp Arg Leu Leu Asn Pro	Gly Glu Tyr Val Val Thr	
680	685	690
Ala Lys Ala Glu Gly Phe Thr Ala Ser	Thr Lys Asn Cys Met Val	
695	700	705
Gly Tyr Asp Met Gly Ala Thr Arg Cys	Asp Phe Thr Leu Ser Lys	
710	715	720
Thr Asn Met Ala Arg Ile Arg Glu Ile	Met Glu Lys Phe Gly Lys	
725	730	735
Gln Pro Val Ser Leu Pro Ala Arg Arg	Leu Lys Leu Arg Gly Arg	
740	745	750
Lys Arg Arg Gln Arg Gly		
755		

<210> 63

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 63

gttctcaatg agctaccgt cccc 24

<210> 64
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 64
 cgcgatgtag tggaactcgg gctc 24

<210> 65
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 65
 atccgcataa accctcagtc ctggtttgat aatgggagca tctgcatgag 50

<210> 66
 <211> 2854
 <212> DNA
 <213> Homo sapiens

<400> 66
 ctaagaggac aagatgaggc cgggcctctc atttctccta gcccttctgt 50
 tcttccttgg ccaagctgca ggggatttgg gggatgtggg acctccaatt 100
 cccagccccg gcttcagctc tttcccaggt gttgactcca gctccagctt 150
 cagctccagc tccaggtcgg gctccagctc cagccgcagc ttaggcagcg 200
 gaggttctgt gtcccagttg ttttccaatt tcaccggctc cgtggatgac 250
 cgtgggacct gccagtgtc tgtttccctg ccagacacca cttttcccg 300
 ggacagagtg gaacgcttgg aattcacagc tcatgttctt tctcagaagt 350
 ttgagaaaaga actttctaaa gtgagggaat atgtccaatt aattagtgtg 400
 tatgaaaaga aactgttaaa cctaactgtc cgaattgaca tcatggagaa 450
 ggataccatt tcttacctg aactggactt cgagctgac aaggtagaag 500
 tgaaggagat ggaaaaactg gtcatacagc tgaaggagag ttttggtgga 550
 agctcagaaa ttgttgacca gctggaggtg gagataagaa atatgactct 600
 cttggtagag aagcttgaga cactagacaa aaacaatgtc cttgccattc 650
 gccgagaaat cgtggctctg aagaccaagc tgaaagagtg tgaggcctct 700
 aaagatcaaa acaccctgt cgtccaccct cctcccactc caggagctg 750
 tggatcatgg ggtgtggtga acatcagcaa accgtctgtg gttcagctca 800
 actggagagg gttttcttat ctatatggtg cttggggtag ggattactct 850
 cccagcatc caaacaagg actgtattgg gtggcgccat tgaatacaga 900

<213> Homo sapiens

<220>

<221> unsure

<222> 206, 217, 387

<223> unknown base

<400> 68

gctctgaaga ccaagctgaa agagtgtgag gcctctaaag atcaaacacc 50
cctgtcgtcc accctcctcc cactccaggg agctgtggtc atgggtggtgt 100
ggtgaacatc agcaaaccgt ctgtggttca gctcaactgg agaggggtttt 150
cttatctata tgggtgcttg ggtagggatt actctcccca gcatccaaac 200
aaaggnatgt attggngggc gccattgaat acagatggga gactgttgga 250
gtattataga ctgtacaacc cactggatga tttgctattg tatataaatg 300
ctcgagagtt gcggatcacc tatggccaag gtagtggtac agcagtttac 350
aacaacaaca tgtacgtcaa catgtacaac accgggnata ttgccagagt 400
taacctgacc 410

<210> 69

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 69

agctgtggtc atgggtggtg ggtg 24

<210> 70

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 70

ctaccttggc catagtgat ccgc 24

<210> 71

<211> 42

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 71

catcagcaaa ccgtctgtgg ttcagctcaa ctggagaggg tt 42

<210> 72

<211> 3127

<212> DNA

<213> Homo sapiens

<400> 72

tctcgcatat agtaaataat ctccgaaagg cgagaaagaa gctgtctcca 50
tcttgtctgt atccgctgct cttgtgacgt tgtggagatg gggagcgtcc 100
tggggctgtg ctccatggcg agctggatac catgtttgtg tggaagtgcc 150
ccgtgtttgc tatgccgatg ctgtcctagt ggaaacaact ccactgtaac 200
tagattgatc tatgcacttt tcttgcttgt tggagtatgt gtagcttgtg 250
taatgttgat accaggaatg gaagaacaac tgaataagat tcctggattt 300
tgtgagaatg agaaagggtg tgtcccttgt aacatthttgg ttggctataa 350
agctgtatat cgthttgtgt ttggthttggc tatgtttctat cttctttctct 400
ctttactaat gatcaaagtg aagagtagca gtgatactag agctgcagtg 450
cacaatggat tttggthtctt taaatthtgc gcagcaattg caattattat 500
tggggcattc ttcattccag aaggaaacttt tacaactgtg tggthttatg 550
taggcattggc aggtgccttt tgtttcatcc tcatacaact agtcttactt 600
attgattttg cacattcatg gaatgaatcg tgggttgaaa aaatggaaga 650
agggaaactcg agatgttggg atgcagcctt gttatcagct acagctctga 700
attatctgct gtctthtagt gctatcgtcc tgttctthtgt ctactacact 750
catccagcca gttgttcaga aaacaaggcg ttcatacagt tcaacatgct 800
cctctgcgtt ggtgcttctg taatgtctat actgccaaaa atccaagaat 850
cacaaccaag atctggthttg ttacagtctt cagtaattac agtctacaca 900
atgtattttga catggtcagc tatgaccaat gaaccagaaa caaattgcaa 950
cccaagtcta ctaagcataa ttggctacaa tacaacaagc actgtcccaa 1000
aggaagggca gtcagtccag tgggtggcatg ctcaaggaat tataggacta 1050
attctctthtt tgttgtgtgt atthttattcc agcatccgta cttcaaacaa 1100
tagtcaggth aataaactga ctctaacaag tgatgaatct acattaatag 1150
aagatgggtg agctagaagt gatggatcac tggaggatgg ggacgatgth 1200
caccgagctg tagataatga aagggatggg gtcacttaca gttattcctt 1250
ctthcacttc atgctthttcc tggcttcaact ttatatcatg atgacctta 1300
ccaactggc caggtatgaa ccctctcgtg agatgaaaag tcagtggaca 1350
gctgtctggg tgaaaatctc ttccagthtg attggcatcg tgcgttatgt 1400
ttggacactc gtggcaccac ttgttcttac aaatcgtgat tttgactgag 1450
tgagacttht agcatgaaag tcccactthg attattgctt atthgaaaac 1500
agtattccca actthttgtaa agthtgtgtat gththttgctt cccatgtaac 1550

ttctccagtg ttctggcatg aattagatgt tactgcttgt ctttttggtta 1600
 ttttcttacc aagtgcattg atatgtgaag tagaatgaat tgcagaggaa 1650
 agttttatga atatggtgat gagttagtaa aagtggccat tattgggctt 1700
 attctctgct ctatagttgt gaaatgaaga gtaaaaacaa atttggttga 1750
 ctattttaaa attatattag accttaagct gtttttagcaa gcattaaagc 1800
 aaatgtatgg ctgccttttg aaatatattga tgtgttgcoct ggcaggatac 1850
 tgcaaagaac atgggtttatt taaaatttta taaacaagtc acttaaatgc 1900
 cagttgtctg aaaaatctta taaggtttta cccttgatac ggaatttaca 1950
 caggtaggga gtgttttagtg gacaatagtg taggttatgg atggaggtgt 2000
 cggactaaa ttgaataacg agtaaataat cttacttggg tagagatggc 2050
 ctttgccaac aaagtgaact gttttggttg ttttaaactc atgaagtatg 2100
 gggtcagtgg aaatgttttg aactctgaag gatttagaca aggttttgaa 2150
 aaggataatc atgggttaga aggaagtgtt ttgaaagtca ctttgaaagt 2200
 tagttttggg cccagcacgg tagctcacc ttggtaatcc cagcactttg 2250
 ggagcttaag tgggtagatt acttgagccc aggaattcag accagcttgg 2300
 cacatggtga acctgttcta taaaaataat ctggctttga gcatatgcct 2350
 gtggtccagc actgagaggc tagtgaagat tgctgagccc agagccaaag 2400
 gttgcagtga gcaagtcacg tcaactgcact ctagctggca cagagtaagc 2450
 caaaaaata tatatatatt gaaatcaagg aggcaaaatt ttgacaggga 2500
 aggaagtaac tgcaaaacca ctaggcttta gtaggtactt atataaaatc 2550
 tagtccagtt ctctcattta aaaaatgaa gacactgaaa tacagactta 2600
 aatagctcag atagctaatt aggaaatttc aagttggcca ataatagcat 2650
 tctctctgac atttaaaaat aatttctatt caaaatacat gcatattgat 2700
 ttacacctca tactgtgata attaatgtga tgtggattgc tgggtgtccag 2750
 catgacccat aaacaggtca gaagaatgat ggaatgtttt agaataaact 2800
 cctgcttata gtatactaca cagttcaaaa gatgtttaaa atgcttttgt 2850
 atttactgcc atgtaattga aatatataga ttattgtaac ctttcaacct 2900
 gaaaatcaag cagtatgaga gtttagttat ttgtatgtgt cactagtgtc 2950
 taatgaagct tttaaaatct acaatttctt ctttaaaaat atttattaat 3000
 gtgaatggaa tataacaatt cagcttaatt cccaacctt attctgtgtg 3050
 tagacattgt attccacaat tttgaatggc tgtgttttac ctctaaataa 3100
 atgaattcag agaaaaaaaa aaaaaaa 3127

<210> 73
 <211> 453
 <212> PRT
 <213> Homo sapiens

<400> 73

Met	Gly	Ser	Val	Leu	Gly	Leu	Cys	Ser	Met	Ala	Ser	Trp	Ile	Pro
1				5					10					15
Cys	Leu	Cys	Gly	Ser	Ala	Pro	Cys	Leu	Leu	Cys	Arg	Cys	Cys	Pro
				20					25					30
Ser	Gly	Asn	Asn	Ser	Thr	Val	Thr	Arg	Leu	Ile	Tyr	Ala	Leu	Phe
				35					40					45
Leu	Leu	Val	Gly	Val	Cys	Val	Ala	Cys	Val	Met	Leu	Ile	Pro	Gly
				50					55					60
Met	Glu	Glu	Gln	Leu	Asn	Lys	Ile	Pro	Gly	Phe	Cys	Glu	Asn	Glu
				65					70					75
Lys	Gly	Val	Val	Pro	Cys	Asn	Ile	Leu	Val	Gly	Tyr	Lys	Ala	Val
				80					85					90
Tyr	Arg	Leu	Cys	Phe	Gly	Leu	Ala	Met	Phe	Tyr	Leu	Leu	Leu	Ser
				95					100					105
Leu	Leu	Met	Ile	Lys	Val	Lys	Ser	Ser	Ser	Asp	Pro	Arg	Ala	Ala
				110					115					120
Val	His	Asn	Gly	Phe	Trp	Phe	Phe	Lys	Phe	Ala	Ala	Ala	Ile	Ala
				125					130					135
Ile	Ile	Ile	Gly	Ala	Phe	Phe	Ile	Pro	Glu	Gly	Thr	Phe	Thr	Thr
				140					145					150
Val	Trp	Phe	Tyr	Val	Gly	Met	Ala	Gly	Ala	Phe	Cys	Phe	Ile	Leu
				155					160					165
Ile	Gln	Leu	Val	Leu	Leu	Ile	Asp	Phe	Ala	His	Ser	Trp	Asn	Glu
				170					175					180
Ser	Trp	Val	Glu	Lys	Met	Glu	Glu	Gly	Asn	Ser	Arg	Cys	Trp	Tyr
				185					190					195
Ala	Ala	Leu	Leu	Ser	Ala	Thr	Ala	Leu	Asn	Tyr	Leu	Leu	Ser	Leu
				200					205					210
Val	Ala	Ile	Val	Leu	Phe	Phe	Val	Tyr	Tyr	Thr	His	Pro	Ala	Ser
				215					220					225
Cys	Ser	Glu	Asn	Lys	Ala	Phe	Ile	Ser	Val	Asn	Met	Leu	Leu	Cys
				230					235					240
Val	Gly	Ala	Ser	Val	Met	Ser	Ile	Leu	Pro	Lys	Ile	Gln	Glu	Ser
				245					250					255
Gln	Pro	Arg	Ser	Gly	Leu	Leu	Gln	Ser	Ser	Val	Ile	Thr	Val	Tyr
				260					265					270
Thr	Met	Tyr	Leu	Thr	Trp	Ser	Ala	Met	Thr	Asn	Glu	Pro	Glu	Thr
				275					280					285

Asn	Cys	Asn	Pro	Ser	Leu	Leu	Ser	Ile	Ile	Gly	Tyr	Asn	Thr	Thr	
				290					295					300	
Ser	Thr	Val	Pro	Lys	Glu	Gly	Gln	Ser	Val	Gln	Trp	Trp	His	Ala	
				305					310					315	
Gln	Gly	Ile	Ile	Gly	Leu	Ile	Leu	Phe	Leu	Leu	Cys	Val	Phe	Tyr	
				320					325					330	
Ser	Ser	Ile	Arg	Thr	Ser	Asn	Asn	Ser	Gln	Val	Asn	Lys	Leu	Thr	
				335					340					345	
Leu	Thr	Ser	Asp	Glu	Ser	Thr	Leu	Ile	Glu	Asp	Gly	Gly	Ala	Arg	
				350					355					360	
Ser	Asp	Gly	Ser	Leu	Glu	Asp	Gly	Asp	Asp	Val	His	Arg	Ala	Val	
				365					370					375	
Asp	Asn	Glu	Arg	Asp	Gly	Val	Thr	Tyr	Ser	Tyr	Ser	Phe	Phe	His	
				380					385					390	
Phe	Met	Leu	Phe	Leu	Ala	Ser	Leu	Tyr	Ile	Met	Met	Thr	Leu	Thr	
				395					400					405	
Asn	Trp	Ser	Arg	Tyr	Glu	Pro	Ser	Arg	Glu	Met	Lys	Ser	Gln	Trp	
				410					415					420	
Thr	Ala	Val	Trp	Val	Lys	Ile	Ser	Ser	Ser	Trp	Ile	Gly	Ile	Val	
				425					430					435	
Leu	Tyr	Val	Trp	Thr	Leu	Val	Ala	Pro	Leu	Val	Leu	Thr	Asn	Arg	
				440					445					450	

Asp Phe Asp

<210> 74
 <211> 480
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 48, 163
 <223> unknown base

<400> 74
 gcgagaaaga agctgtctcc atcttgtctg tatcccgtcg cttcttgnga 50
 cgttgtggag atggggagcg tccctggggc tgtgctccat ggcgagctgg 100
 ataccatgtt tgtgtggaag tgccccgtgt ttgctatgcc gatgctgtcc 150
 tagtggaac aantccactg taactagatt gatctatgca cttttcttgc 200
 ttgttgagat atgtgtagct tgtgtaagt tgataccagg aatggaagaa 250
 caactgaata agattcctgg attttgtgag aatgagaaag gtgttgtccc 300
 ttgtaacatt ttggttggt ataaagctgt atatcgtttg tgctttggtt 350
 tggctatgtt ctatcttctt ctctctttac taatgatcaa agtgaagagt 400

agcagtgatc ctagagctgc agtgcacaat ggatttttggg tcttttaaatt 450
tgctgcagca attgcaatta ttattggggc 480

<210> 75
<211> 438
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 32, 65, 92, 121, 142, 154, 170, 293, 315, 323
<223> unknown base

<400> 75
gttattgtga actttgtgga gatgggagggt cntggggctg tgttccatgg 50
cgagctggat accangtttg tgtggaagtg ccccggtgtt gntatgccga 100
tgctgtccta gtggaacaa ntccactgta attagattga tntatgcact 150
ttntttgctt gttggagtan gtgtagcttg tgtaatgttg ataccaggaa 200
tggaagaaca actgaataag attcctggat tttgtgagaa tgagaaagggt 250
gttgtccctt gtaacatttt gggttgctat aaagctgtat atngtttgtg 300
ctttggtttg gctangttct atnttcttct ctctttacta atgatcaaag 350
tgaagagtag cagtgatcct agagctgcag tgcacaatgg attttggttt 400
tttaaatttg ctgcagcaat tgcaattatt attggggc 438

<210> 76
<211> 473
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 48
<223> unknown base

<400> 76
aagaagctgt ctccatcttg tctgtatccg ctgctcttgt gaacgttntg 50
gagatgggga gcgtccttgg ggttgtgctc catggcgagc tggataccat 100
gtttgtgttg aagtgccccg tgtttgctat gccgatgctg tcttagtgga 150
aacaactcca ctgtaactag attgatctat gcacttttct tgcttgttgg 200
agtatgtgta gcttgtgtaa tgttgatacc aggaatggaa gaacaactga 250
ataagattcc tggattttgt gagaatgaga aagggtgttg cccttgtaac 300
attttggttg gctataaagc tgtatatcgt ttgtgctttg gtttggtat 350
gttctatctt cttctctctt tactaatgat caaagtgaag agtagcagt 400
atcctagagc tgcagtgcac aatggatttt gggtctttaa atttgctgca 450
gcaattgcaa ttattatttg ggc 473

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 80
aatccattgt gcactgcagc tctagg 26

<210> 81
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 81
gagcatgccca ccactggact gac 23

<210> 82
<211> 54
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 82
gccgatgctg tcctagtga aacaactcca ctgtaactag attgatctat 50

gcac 54

<210> 83
<211> 3906
<212> DNA
<213> Homo sapiens

<400> 83
ctcgggcgcg cacaggcagc tcggtttgcc ctgcgattga gctgcggggtc 50
gcggccggcg ccggcctctc caatggcaaa tgtgtgtggc tggaggcgag 100
cgcgaggctt tcggcaaagg cagtcgagt tttgcagacc ggggcgagtc 150
ctgtgaaagc agataaaaga aaacatttat taacgtgtca ttacgagggg 200
agcgcccgcg cggggctgtc gcactccccg cggaacattt ggctccctcc 250
agctccgaga gaggagaaga agaaagcgga aaagaggcag attcacgtcg 300
tttcagcca agtggacctg atcgatggcc ctctgaatt tatcacgata 350
tttgatttat tagcgatgcc ccttggtttg tgtgttacgc acacacacgt 400
gcacacaagg ctctggctcg ctccctccc tcgtttccag ctctggggcg 450
aatcccacat ctgtttcaac tctccgccga gggcgagcag gagcgagagt 500
gtgtcgaatc tgcgagtga gagggacgag ggaaaagaaa caaagccaca 550
gacgcaactt gagactcccc catccccaaa gaagcaccag atcagcaaaa 600

gtccgcagtc gctccatccg ctccagtggcc atccaggtgg acggcaggg 2250
gtaccacgta ggcctgggtg atgccgccc gccccgaaac ctcaccaagc 2300
ggcactggcc agggggcccct gaggaccaag atgacaagga tgggtggggac 2350
ttcagtggca ctggaggcct tcccgactac tcagccgcca accccattaa 2400
agtgacacat cgggtgctaca tcctagagaa cgacacagtc cagtgtgacc 2450
tggacctgta caagtccctg caggcctgga aagaccacaa gctgcacatc 2500
gaccacgaga ttgaaaccct gcagaacaaa attagaacc tgaggggaagt 2550
ccgaggtcac ctgaagaaaa agcggccaga agaattgtgac tgtcacaaaa 2600
tcagctacca caccagcac aaaggccgcc tcaagcacag aggctccagt 2650
ctgcatcctt tcaggaaggg cctgcaagag aaggacaagg tgtggctgtt 2700
gcgggagcag aagcgcaaga agaaactccg caagctgctc aagcgctgc 2750
agaacaacga cacgtgcagc atgccaggcc tcacgtgctt caccacgac 2800
aaccagcact ggcagacggc gcctttctgg aactggggc ctttctgtgc 2850
ctgcaccagc gccacaata acacgtactg gtgcatgagg accatcaatg 2900
agactcaciaa tttcctcttc tgtgaatttg caactggctt octagagtac 2950
tttgatctca acacagaccc ctaccagctg atgaatgcag tgaacacact 3000
ggacagggat gtcctcaacc agctacacgt acagctcatg gagctgagga 3050
gctgcaaggg ttacaagcag tgtaaccccc ggactcgaaa catggacctg 3100
gatggaggaa gctatgagca atacaggcag tttcagcgtc gaaagtggcc 3150
agaaatgaag agaccttctt ccaaatcact gggacaactg tgggaaggct 3200
gggaagggtta agaaacaaca gaggtggacc tccaaaaaca tagaggcatc 3250
acctgactgc acaggcaatg aaaaaccatg tgggtgattt ccagcagacc 3300
tgtgctattg gccaggaggc ctgagaaaagc aagcacgcac tctcagtcaa 3350
catgacagat tctggaggat aaccagcagg agcagagata acttcaggaa 3400
gtccattttt gcccctgctt ttgctttgga ttatacctca ccagctgcac 3450
aaaatgcatt ttttcgtatc aaaaagtcac cactaacctt cccccagaag 3500
ctcacaaagg aaaacggaga gagcgagcga gagagatttc cttggaaatt 3550
tctcccaagg gcgaaagtca ttggaatttt taaatcatag gggaaaagca 3600
gtcctgttct aaatcctctt attcttttgg tttgtcacia agaaggaact 3650
aagaagcagg acagaggcaa cgtggagagg ctgaaaacag tgcagagacg 3700
tttgacaatg agtcagtagc acaaaagaga tgacatttac ctagcactat 3750
aaaccctggt tgcctctgaa gaaactgcct tcattgtata tatgtgacta 3800

tttacatgta atcaacatgg gaacttttag gggaacctaa taagaaatcc 3850
 caattttcag gagtggtggt gtcaataaac gctctgtggc cagtgtaaaa 3900
 gaaaaa 3906

<210> 84
 <211> 867
 <212> PRT
 <213> Homo sapiens

<400> 84
 Met Gly Pro Pro Ser Leu Val Leu Cys Leu Leu Ser Ala Thr Val
 1 5 10 15
 Phe Ser Leu Leu Gly Gly Ser Ser Ala Phe Leu Ser His His Arg
 20 25 30
 Leu Lys Gly Arg Phe Gln Arg Asp Arg Arg Asn Ile Arg Pro Asn
 35 40 45
 Ile Ile Leu Val Leu Thr Asp Asp Gln Asp Val Glu Leu Gly Ser
 50 55 60
 Met Gln Val Met Asn Lys Thr Arg Arg Ile Met Glu Gln Gly Gly
 65 70 75
 Ala His Phe Ile Asn Ala Phe Val Thr Thr Pro Met Cys Cys Pro
 80 85 90
 Ser Arg Ser Ser Ile Leu Thr Gly Lys Tyr Val His Asn His Asn
 95 100 105
 Thr Tyr Thr Asn Asn Glu Asn Cys Ser Ser Pro Ser Trp Gln Ala
 110 115 120
 Gln His Glu Ser Arg Thr Phe Ala Val Tyr Leu Asn Ser Thr Gly
 125 130 135
 Tyr Arg Thr Ala Phe Phe Gly Lys Tyr Leu Asn Glu Tyr Asn Gly
 140 145 150
 Ser Tyr Val Pro Pro Gly Trp Lys Glu Trp Val Gly Leu Leu Lys
 155 160 165
 Asn Ser Arg Phe Tyr Asn Tyr Thr Leu Cys Arg Asn Gly Val Lys
 170 175 180
 Glu Lys His Gly Ser Asp Tyr Ser Lys Asp Tyr Leu Thr Asp Leu
 185 190 195
 Ile Thr Asn Asp Ser Val Ser Phe Phe Arg Thr Ser Lys Lys Met
 200 205 210
 Tyr Pro His Arg Pro Val Leu Met Val Ile Ser His Ala Ala Pro
 215 220 225
 His Gly Pro Glu Asp Ser Ala Pro Gln Tyr Ser Arg Leu Phe Pro
 230 235 240
 Asn Ala Ser Gln His Ile Thr Pro Ser Tyr Asn Tyr Ala Pro Asn
 245 250 255

Pro	Asp	Lys	His	Trp	Ile	Met	Arg	Tyr	Thr	Gly	Pro	Met	Lys	Pro	260	265	270
Ile	His	Met	Glu	Phe	Thr	Asn	Met	Leu	Gln	Arg	Lys	Arg	Leu	Gln	275	280	285
Thr	Leu	Met	Ser	Val	Asp	Asp	Ser	Met	Glu	Thr	Ile	Tyr	Asn	Met	290	295	300
Leu	Val	Glu	Thr	Gly	Glu	Leu	Asp	Asn	Thr	Tyr	Ile	Val	Tyr	Thr	305	310	315
Ala	Asp	His	Gly	Tyr	His	Ile	Gly	Gln	Phe	Gly	Leu	Val	Lys	Gly	320	325	330
Lys	Ser	Met	Pro	Tyr	Glu	Phe	Asp	Ile	Arg	Val	Pro	Phe	Tyr	Val	335	340	345
Arg	Gly	Pro	Asn	Val	Glu	Ala	Gly	Cys	Leu	Asn	Pro	His	Ile	Val	350	355	360
Leu	Asn	Ile	Asp	Leu	Ala	Pro	Thr	Ile	Leu	Asp	Ile	Ala	Gly	Leu	365	370	375
Asp	Ile	Pro	Ala	Asp	Met	Asp	Gly	Lys	Ser	Ile	Leu	Lys	Leu	Leu	380	385	390
Asp	Thr	Glu	Arg	Pro	Val	Asn	Arg	Phe	His	Leu	Lys	Lys	Lys	Met	395	400	405
Arg	Val	Trp	Arg	Asp	Ser	Phe	Leu	Val	Glu	Arg	Gly	Lys	Leu	Leu	410	415	420
His	Lys	Arg	Asp	Asn	Asp	Lys	Val	Asp	Ala	Gln	Glu	Glu	Asn	Phe	425	430	435
Leu	Pro	Lys	Tyr	Gln	Arg	Val	Lys	Asp	Leu	Cys	Gln	Arg	Ala	Glu	440	445	450
Tyr	Gln	Thr	Ala	Cys	Glu	Gln	Leu	Gly	Gln	Lys	Trp	Gln	Cys	Val	455	460	465
Glu	Asp	Ala	Thr	Gly	Lys	Leu	Lys	Leu	His	Lys	Cys	Lys	Gly	Pro	470	475	480
Met	Arg	Leu	Gly	Gly	Ser	Arg	Ala	Leu	Ser	Asn	Leu	Val	Pro	Lys	485	490	495
Tyr	Tyr	Gly	Gln	Gly	Ser	Glu	Ala	Cys	Thr	Cys	Asp	Ser	Gly	Asp	500	505	510
Tyr	Lys	Leu	Ser	Leu	Ala	Gly	Arg	Arg	Lys	Lys	Leu	Phe	Lys	Lys	515	520	525
Lys	Tyr	Lys	Ala	Ser	Tyr	Val	Arg	Ser	Arg	Ser	Ile	Arg	Ser	Val	530	535	540
Ala	Ile	Glu	Val	Asp	Gly	Arg	Val	Tyr	His	Val	Gly	Leu	Gly	Asp	545	550	555
Ala	Ala	Gln	Pro	Arg	Asn	Leu	Thr	Lys	Arg	His	Trp	Pro	Gly	Ala	560	565	570

Pro	Glu	Asp	Gln	Asp 575	Asp	Lys	Asp	Gly	Gly 580	Asp	Phe	Ser	Gly	Thr 585
Gly	Gly	Leu	Pro	Asp 590	Tyr	Ser	Ala	Ala	Asn 595	Pro	Ile	Lys	Val	Thr 600
His	Arg	Cys	Tyr	Ile 605	Leu	Glu	Asn	Asp	Thr 610	Val	Gln	Cys	Asp	Leu 615
Asp	Leu	Tyr	Lys	Ser 620	Leu	Gln	Ala	Trp	Lys 625	Asp	His	Lys	Leu	His 630
Ile	Asp	His	Glu	Ile 635	Glu	Thr	Leu	Gln	Asn 640	Lys	Ile	Lys	Asn	Leu 645
Arg	Glu	Val	Arg	Gly 650	His	Leu	Lys	Lys	Lys 655	Arg	Pro	Glu	Glu	Cys 660
Asp	Cys	His	Lys	Ile 665	Ser	Tyr	His	Thr	Gln 670	His	Lys	Gly	Arg	Leu 675
Lys	His	Arg	Gly	Ser 680	Ser	Leu	His	Pro	Phe 685	Arg	Lys	Gly	Leu	Gln 690
Glu	Lys	Asp	Lys	Val 695	Trp	Leu	Leu	Arg	Glu 700	Gln	Lys	Arg	Lys	Lys 705
Lys	Leu	Arg	Lys	Leu 710	Leu	Lys	Arg	Leu	Gln 715	Asn	Asn	Asp	Thr	Cys 720
Ser	Met	Pro	Gly	Leu 725	Thr	Cys	Phe	Thr	His 730	Asp	Asn	Gln	His	Trp 735
Gln	Thr	Ala	Pro	Phe 740	Trp	Thr	Leu	Gly	Pro 745	Phe	Cys	Ala	Cys	Thr 750
Ser	Ala	Asn	Asn	Asn 755	Thr	Tyr	Trp	Cys	Met 760	Arg	Thr	Ile	Asn	Glu 765
Thr	His	Asn	Phe	Leu 770	Phe	Cys	Glu	Phe	Ala 775	Thr	Gly	Phe	Leu	Glu 780
Tyr	Phe	Asp	Leu	Asn 785	Thr	Asp	Pro	Tyr	Gln 790	Leu	Met	Asn	Ala	Val 795
Asn	Thr	Leu	Asp	Arg 800	Asp	Val	Leu	Asn	Gln 805	Leu	His	Val	Gln	Leu 810
Met	Glu	Leu	Arg	Ser 815	Cys	Lys	Gly	Tyr	Lys 820	Gln	Cys	Asn	Pro	Arg 825
Thr	Arg	Asn	Met	Asp 830	Leu	Asp	Gly	Gly	Ser 835	Tyr	Glu	Gln	Tyr	Arg 840
Gln	Phe	Gln	Arg	Arg 845	Lys	Trp	Pro	Glu	Met 850	Lys	Arg	Pro	Ser	Ser 855
Lys	Ser	Leu	Gly	Gln 860	Leu	Trp	Glu	Gly	Trp 865	Glu	Gly			

<210>	85
<211>	19
<212>	DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 85
gaagccggct gtctgaatc 19

<210> 86
<211> 18
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 86
ggccagctat ctccgcag 18

<210> 87
<211> 18
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 87
aagggcctgc aagagaag 18

<210> 88
<211> 18
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 88
cactgggaca actgtggg 18

<210> 89
<211> 18
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 89
cagaggcaac gtggagag 18

<210> 90
<211> 21
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 90
aagtattgtc atacagtgtt c 21

atgccccagt gtactatggc agcagagaat ggaggaacac tgggtctgca 650
 gtgctgaagg gtttggggag tggagagcaa ggggtgctctt tcggggctgg 700
 acagcccgtc ttgtgacagt gactcccagt gagccccaga aatgacaagc 750
 gtgtcttggc agagccagca cacaagtgga tgtgaagtgc ccgtcttgac 800
 ctccatcatca ggctgctgca ggcctctggc gggcagggca ctgggagagg 850
 ccctgagaat gtccttttgg tttggagaag gcagtgtgag gctgcacagt 900
 caattcatcg gtgccttagt ccaagaaaat aaaaaccact aagaagcttt 950
 aaaaaaaaaa aaaaaaaaaa a 971

<210> 95
 <211> 115
 <212> PRT
 <213> Homo sapiens

<400> 95
 Met Leu Gly Leu Leu Gly Ser Thr Ala Leu Val Gly Trp Ile Thr
 1 5 10 15
 Gly Ala Ala Val Ala Val Leu Leu Leu Leu Leu Leu Ala Thr
 20 25 30
 Cys Leu Phe His Gly Arg Gln Asp Cys Asp Val Glu Arg Asn Arg
 35 40 45
 Thr Ala Ala Gly Gly Asn Arg Val Arg Arg Ala Gln Pro Trp Pro
 50 55 60
 Phe Arg Arg Arg Gly His Leu Gly Ile Phe His His His Arg His
 65 70 75
 Pro Gly His Val Ser His Val Pro Asn Val Gly Leu His His His
 80 85 90
 His His Pro Arg His Thr Pro His His Leu His His His His His
 95 100 105
 Pro His Arg His His Pro Arg His Ala Arg
 110 115

<210> 96
 <211> 1312
 <212> DNA
 <213> Homo sapiens

<400> 96
 ggcggtgct gagctgcctt gaggtgcagt gttggggatc cagagccatg 50
 tcggacctgc tactactggg cctgattggg ggcctgactc tcttactgct 100
 gctgacgctg ctggcctttg ccgggtactc agggctactg gctgggggtgg 150
 aagtgagtgc tgggtcaccc cccatccgca acgtcactgt ggcctacaag 200
 ttccacatgg ggctctatgg tgagactggg cggtttttca ctgagagctg 250
 cagcatctct cccaagctcc gctccatcgc tgtctactat gacaaccccc 300

acatggtgcc ccctgataag tgccgatgtg ccgtgggcag catcctgagt 350
 gaaggtgagg aatcgccctc ccctgagctc atcgacctct accagaaatt 400
 tggcttcaag gtgtttctct tcccggcacc cagccatgtg gtgacagcca 450
 ccttccccta caccaccatt ctgtccatct ggctggctac ccgccgtgtc 500
 catcctgcct tggacaccta catcaaggag cggaagctgt gtgcctatcc 550
 tcggctggag atctaccagg aagaccagat ccatttcatg tgcccactgg 600
 cacggcaggg agacttctat gtgcctgaga tgaaggagac agagtggaaa 650
 tggcgggggc ttgtggaggc cattgacacc caggtggatg gcacaggagc 700
 tgacacaatg agtgacacga gttctgtaag cttggaagtg agccctggca 750
 gccgggagac ttcagctgcc aactgtcac ctggggcgag cagccgtggc 800
 tgggatgacg gtgacacccg cagcgagcac agctacagcg agtcaggtgc 850
 cagcggctcc tcttttgagg agctggactt ggagggcgag gggcccttag 900
 gggagtcacg gctggaccct gggactgagc ccctggggac taccaagtgg 950
 ctctgggagc cactgcccc tgagaagggc aaggagtaac ccatggcctg 1000
 caccctcctg cagtgcagtt gctgaggaac tgagcagact ctccagcaga 1050
 ctctccagcc ctcttctcc ttcctctggg ggaggagggg ttcctgaggg 1100
 acctgacttc ccctgtcca ggcctcttgc taagccttct cctcactgcc 1150
 ctttaggctc ccagggccag aggagccagg gactattttc tgcaccagcc 1200
 cccagggctg ccgcccctgt tgtgtctttt tttcagactc acagtggagc 1250
 ttccaggacc cagaataaag ccaatgattt acttgtttca cctggaaaaa 1300
 aaaaaaaaaa aa 1312

<210> 97
 <211> 313
 <212> PRT
 <213> Homo sapiens

<400> 97
 Met Ser Asp Leu Leu Leu Leu Gly Leu Ile Gly Gly Leu Thr Leu
 1 5 10 15
 Leu Leu Leu Leu Thr Leu Leu Ala Phe Ala Gly Tyr Ser Gly Leu
 20 25 30
 Leu Ala Gly Val Glu Val Ser Ala Gly Ser Pro Pro Ile Arg Asn
 35 40 45
 Val Thr Val Ala Tyr Lys Phe His Met Gly Leu Tyr Gly Glu Thr
 50 55 60
 Gly Arg Leu Phe Thr Glu Ser Cys Ser Ile Ser Pro Lys Leu Arg
 65 70 75

cacgcttcac atacactaca cgggaagcctt ggtagatgga cgtattattg 300
acacctccct gaccagagac cctctgggta tagaacttgg ccaaaagcag 350
gtgattccag gtctggagca gagtcttctc gacatgtgtg tgggagagaa 400
gcgaagggca atcattcctt ctcaacttggc ctatggaaaa cggggatttc 450
caccatctgt cccagcggat gcagtgggtgc agtatgacgt ggagctgatt 500
gcactaatcc gagccaacta ctggctaaag ctggtgaagg gcattttgcc 550
tctggtaggg atggccatgg tgccagccct cctgggcctc attgggtatc 600
acctatacag aaaggccaat agacccaaag tctccaaaaa gaagctcaag 650
gaagagaaaac gaaacaagag caaaaagaaa taataaataa taaattttaa 700
aaaacttaaa aaaaaaaaaa aaaaa 725

<210> 99
<211> 201
<212> PRT
<213> Homo sapiens

<400> 99
Met Thr Leu Arg Pro Ser Leu Leu Pro Leu His Leu Leu Leu Leu
1 5 10 15
Leu Leu Leu Ser Ala Ala Val Cys Arg Ala Glu Ala Gly Leu Glu
20 25 30
Thr Glu Ser Pro Val Arg Thr Leu Gln Val Glu Thr Leu Val Glu
35 40 45
Pro Pro Glu Pro Cys Ala Glu Pro Ala Ala Phe Gly Asp Thr Leu
50 55 60
His Ile His Tyr Thr Gly Ser Leu Val Asp Gly Arg Ile Ile Asp
65 70 75
Thr Ser Leu Thr Arg Asp Pro Leu Val Ile Glu Leu Gly Gln Lys
80 85 90
Gln Val Ile Pro Gly Leu Glu Gln Ser Leu Leu Asp Met Cys Val
95 100 105
Gly Glu Lys Arg Arg Ala Ile Ile Pro Ser His Leu Ala Tyr Gly
110 115 120
Lys Arg Gly Phe Pro Pro Ser Val Pro Ala Asp Ala Val Val Gln
125 130 135
Tyr Asp Val Glu Leu Ile Ala Leu Ile Arg Ala Asn Tyr Trp Leu
140 145 150
Lys Leu Val Lys Gly Ile Leu Pro Leu Val Gly Met Ala Met Val
155 160 165
Pro Ala Leu Leu Gly Leu Ile Gly Tyr His Leu Tyr Arg Lys Ala
170 175 180
Asn Arg Pro Lys Val Ser Lys Lys Lys Leu Lys Glu Glu Lys Arg

185

190

195

Asn Lys Ser Lys Lys Lys
200

<210> 100
<211> 705
<212> DNA
<213> Homo sapiens

<400> 100
cccgggaacg tggtcctggc tgccgcaccc gaacagcctg tcctggtgcc 50
ccggctccct gccccgcgcc cagtcattgac cctgcgcccc tcaactcctcc 100
cgctccatct gctgctgctg ctgctgctca gtgcggcggt gtgccgggct 150
gaggctgggc tcgaaaccga aagtcccgtc cggaccctcc aagtggagac 200
cctggtggag cccccagaac catgtgccga gcccgctgct tttggagaca 250
cgcttcacat aactacacg ggaagcttgg tagatggacg tattattgac 300
acctccctga ccagagaccc tctggttata gaacttggcc aaaagcaggt 350
gattccaggt ctggagcaga gtcttctcga catgtgtgtg ggagagaagc 400
gaagggcaat cattccttct cacttggcct atggaaaacg gggatttcca 450
ccatctgtcc cagcggatgc agtgggtgcag tatgacgtgg agctgattgc 500
actaatccga gccaaactact ggctaaaagct ggtgaagggc attttgcctc 550
tggtagggat ggccatgggt ccacccctct gggcctcatt gggatatcacc 600
tatacagaaa ggccaataga cccaaagtct ccaaaaagaa gctcaaggaa 650
gagaaacgaa acaagagcaa aaagaaataa taaataataa attttaaaaa 700
actta 705

<210> 101
<211> 543
<212> DNA
<213> Homo sapiens

<400> 101
ccgaaagtcc cgtccggacc ctccaagtgg agaccctggt ggagccccca 50
gaaccatgtg ccgagcccg cgtttttgga gacacgcttc acatacacta 100
cacgggaagc ttggtagatg gacgtattat tgacacctcc ctgaccagag 150
accctctggt tatagaactt ggccaaaagc aggtgattcc aggtctggag 200
cagagtcttc tcgacatgtg tgtgggagag aagcgaaggg caatcattcc 250
ttctcacttg gcctatggaa aacggggatt tccaccatct gtoccagcgg 300
atgcagtggg gcagtatgac gtggagctga ttgcactaat ccgagccaac 350
tactggctaa agctggtgaa gggcattttg cctctggtag ggatggccat 400

ggtgccagcc ctcttgggcc tcattgggta tcacctatac agaaaggcca 450
 atagacccaa agtctccaaa aagaagctca aggaagagaa acgaaacaag 500
 agcaaaaaga aataataaat aataaatttt aaaaaactta aaa 543

<210> 102
 <211> 1316
 <212> DNA
 <213> Homo sapiens

<400> 102
 ctgctgcatc cgggtgtctg gaggtgtggt ccgttttgggt ttcttggcta 50
 aaatcggggg agtgaggcgg gccggcgcg cgcgacaccg ggctccggaa 100
 ccactgcacg acgggggctgg actgacctga aaaaaatgtc tggattttcta 150
 gagggcttga gatgctcaga atgcattgac tgggggggaaa agcgcaatac 200
 tattgcttcc attgctgctg gtgtactatt ttttacaggc tgggtggatta 250
 tcatagatgc agctgttatt tatcccacca tgaaagattt caaccactca 300
 taccatgcct gtggtgttat agcaaccata gccttcctaa tgattaatgc 350
 agtatcgaat ggacaagtcc gaggtgatag ttacagtga ggttgtctgg 400
 gtcaaacagg tgctcgcat tggcttttcg ttggtttcat gttggccttt 450
 ggatctctga ttgcatctat gtggattctt tttggagggt atgttgctaa 500
 agaaaaagac atagtatacc ctggaattgc tgtatttttc cagaatgcct 550
 tcatcttttt tggagggtg gtttttaagt ttggcgcac tgaagactta 600
 tggcagtga caccatctgat ttcccacagc acaacagccc tgcattgggt 650
 tgtttgtttt tttactgctc actcccaacc ttttgtaatg ccattttcta 700
 aacttatttc tgagtgtagt ctgagcttaa agttgtgtaa tactaaaatc 750
 acgagaacac ctaaacaaca accaaaaatc tattgtggta tgcacttgat 800
 taacttataa aatgttagag gaaactttca catgaataat ttttgtcaaa 850
 ttttatcatg gtataatttg taaaaataaa aagaaattac aaaagaaatt 900
 atggatttgt caatgtaagt atttgtcata totgagggtcc aaaaccacaa 950
 tgaaagtgt ctgaagattt aatgtgttta ttcaaagtgt gtctcttctg 1000
 tgtcaaagt taaatgaaat ataaacattt tttagttttt aaaatattcc 1050
 gtggtcaaaa ttcttcctca ctataattgg tatttacttt taccaaaaat 1100
 tctgtgaaca tgtaatgtaa ctggcttttg aggtgtctcc aaggggtgag 1150
 tggacgtgtt ggaagagaga agcaccatgg tccagccacc aggtccctg 1200
 tgtcccttcc atgggaaggt cttccgtgt gcctctcatt ccaagggcag 1250
 gaagatgtga ctgagccatg acacgtgggt ctggtgggat gcacagtcac 1300

tccacatcca ccactg 1316

<210> 103

<211> 157

<212> PRT

<213> Homo sapiens

<400> 103

Met Ser Gly Phe Leu Glu Gly Leu Arg Cys Ser Glu Cys Ile Asp
1 5 10 15

Trp Gly Glu Lys Arg Asn Thr Ile Ala Ser Ile Ala Ala Gly Val
20 25 30

Leu Phe Phe Thr Gly Trp Trp Ile Ile Ile Asp Ala Ala Val Ile
35 40 45

Tyr Pro Thr Met Lys Asp Phe Asn His Ser Tyr His Ala Cys Gly
50 55 60

Val Ile Ala Thr Ile Ala Phe Leu Met Ile Asn Ala Val Ser Asn
65 70 75

Gly Gln Val Arg Gly Asp Ser Tyr Ser Glu Gly Cys Leu Gly Gln
80 85 90

Thr Gly Ala Arg Ile Trp Leu Phe Val Gly Phe Met Leu Ala Phe
95 100 105

Gly Ser Leu Ile Ala Ser Met Trp Ile Leu Phe Gly Gly Tyr Val
110 115 120

Ala Lys Glu Lys Asp Ile Val Tyr Pro Gly Ile Ala Val Phe Phe
125 130 135

Gln Asn Ala Phe Ile Phe Phe Gly Gly Leu Val Phe Lys Phe Gly
140 145 150

Arg Thr Glu Asp Leu Trp Gln
155

<210> 104

<211> 545

<212> DNA

<213> Homo sapiens

<400> 104

ttcttggcta aaatcggggg agtgaggcgg gccggcgcg cgcgacaccg 50

ggctccggaa ccactgcacg acggggctgg actgacctga aaaaaatgtc 100

tggatttcta gagggcttga gatgctcaga atgcattgac tggggggaaa 150

agcgcaatac tattgcttcc attgctgctg gtgtactatt ttttacaggc 200

tgggtggatta tcatagatgc agctgttatt tatcccacca tgaaagattt 250

caaccactca taccatgcct gtggtgttat agcaaccata gccttcctaa 300

tgattaatgc agtatcgaat ggacaagtcc gaggtgatag ttacagtga 350

ggttgtctgg gtcaaacagg tgctcgcat tggcttttcg ttggtttcat 400

gttggccttt ggatctctga ttgcatctat gtggattctt tttggagggt 450
atgttgctaa agaaaaagac atagtatacc ctggaattgc tgtatttttc 500
cagaatgcct tcatcttttt tggagggctg gtttttaagt ttggc 545

<210> 105
<211> 490
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 31, 39, 108, 145, 179, 219, 412, 479
<223> unknown base

<400> 105
tggacggacc tgaaaaaat gtttggattt ntagaggnt tgagatgttc 50
agaatgcatg actgggggaa aagcgcaaact actattgctt ccattgctgc 100
tgggtgtaata ttttttacag gctggtggat tatcatagat gcagntgtta 150
tttatccac catgaaagat ttcaaccant cataccatgc ctgtggtgtt 200
atagcaacca tagccttctt aatgattaat gcagtatcga atggacaagt 250
ccgaggtgat agttacagt aaggttggtt gggtaaaca ggtgctcgca 300
tttggctttt cgttgggttc atgttggcct ttggatctct gattgcatct 350
atgtggattc tttttggagg ttatgttgct aaagaaaaag acatagtata 400
ccctggaatt gntgtatttt tccagaatgc cttcatcttt tttggagggc 450
tggtttttaa gtttggccgc actgaagant tatggcagtg 490

<210> 106
<211> 466
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 26, 38, 81, 115, 207, 329, 380, 446, 449
<223> unknown base

<400> 106
ggacaccggg ttccggacca atgcangacg gggaggantg acctgaaaaa 50
aatgtttgga ttttttagagg gcttgagatg ntcagaatgc attgactggg 100
ggaaaagcgc aatantattg ctttccattg ctgctggtgt actatttttt 150
acaggggtggg ggattatcat agatgcagct gttatttatc ccaccatgaa 200
agatttnaac cactcatacc atgcctgtgg tgttatagca accatagcct 250
tctaataatg taatgcagta tcgaatggac aagtccgagg tgatagttac 300
agtgaagggt gtttgggtca aacaggtgnt cgcatttggc ttttcgttgg 350
tttcatgttg gcctttggat ttctgattgn attctatgcg gattcttctt 400

tg 552

<210> 109
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 109
gggtggatgg tactgctgca tcc 23

<210> 110
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 110
tggttgctg tgggaaatca gatgtg 26

<210> 111
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 111
gtgtctggag gctgtggccg ttttgttttc ttgggctaaa atcggg 46

<210> 112
<211> 3004
<212> DNA
<213> Homo sapiens

<400> 112
cgacgccggc gtgatgtggc ttccgctggg gctgctcctg gctgtgctgc 50
tgctggcogt cctctgcaaa gtttacttgg gactattctc tggcagctcc 100
ccgaatcctt tctccgaaga tgtcaaacgg cccccagcgc ccctggtaac 150
tgacaaggag gccaggaaga aggttctcaa acaagctttt tcagccaacc 200
aagtgccgga gaagctggat gtggtggtaa ttggcagtgg ctttgggggc 250
ctggctgcag ctgcaattct agctaaagct ggcaagcgag tcctggtgct 300
ggaacaacat accaaggcag ggggctgctg tcataccttt ggaaagaatg 350
gccttgaatt tgacacagga atccattaca ttgggcgtat ggaagagggc 400
agcattggcc gttttatctt ggaccagatc actgaagggc agctggactg 450
ggctccccctg tcctctcctt ttgacatcat ggtactggaa gggcccaatg 500
gccgaaagga gtaccccatg tacagtggag agaaagccta cattcagggc 550

ctcaaggaga agtttccaca ggaggaagct atcattgaca agtatataaa 600
 gctgggtaag gtggtatcca gtggagcccc tcatgccatc ctgttgaaat 650
 tcctccatt gcccggtggtt cagctcctcg acaggtgtgg gctgctgact 700
 cgtttctctc cattccttca agcatccacc cagagcctgg ctgaggtcct 750
 gcagcagctg ggggcctcct ctgagctcca ggcagtactc agctacatct 800
 tccccactta cgggtgtcacc cccaaccaca gtgccttttc catgcacgcc 850
 ctgctgggtca accactacat gaaaggaggc ttttatcccc gaggggggttc 900
 cagtgaaatt gccttccaca ccatccctgt gattcagcgg gctgggggcg 950
 ctgtcctcac aaaggccact gtgcagagtg tgttgctgga ctgagctggg 1000
 aaagcctgtg gtgtcagtgt gaagaagggg catgagctgg tgaacatcta 1050
 ttgccccatc gtggtctcca acgcaggact gttcaacacc tatgaacacc 1100
 tactgccggg gaacgcccgc tgcctgccag gtgtgaagca gcaactgggg 1150
 acggtgcggc ccggcttagg catgacctct gttttcatct gcctgcgagg 1200
 caccaaggaa gacctgcatc tgccgtccac caactactat gtttactatg 1250
 acacggacat ggaccaggcg atggagcgct acgtctccat gccagggaa 1300
 gaggtgcgg aacacatccc tcttctcttc ttgcctttcc catcagccaa 1350
 agatccgacc tgggaggacc gattcccagg ccggtccacc atgatcatgc 1400
 tcatacccac tgcctacgag tggtttgagg agtggcaggc ggagctgaag 1450
 ggaaagcggg gcagtgacta tgagaccttc aaaaactcct ttgtggaagc 1500
 ctctatgtca gtggtcctga aactgttccc acagctggag ggaaggtgg 1550
 agagtgtgac tgcaggatcc ccaactacca accagttota tctggctgct 1600
 ccccagggtg cctgctacgg ggctgaccat gacctgggcc gcctgcaccc 1650
 ttgtgtgatg gcctccttga gggcccagag ccccatcccc aacctctatc 1700
 tgacaggcca ggatatcttc acctgtggac tggtcggggc cctgcaaggt 1750
 gccctgctgt gcagcagcgc catcctgaag cggaacttgt actcagacct 1800
 taagaatctt gattctagga tccgggcaca gaagaaaaag aattagttcc 1850
 atcaggggagg agtcagagga atttgcccaa tggctggggc atctcccttg 1900
 acttaccat aatgtctttc tgcattagtt ccttgcaagt ataaagcact 1950
 ctaatttggg tctgatgcct gaagagaggc ctagttttaa tcacaattcc 2000
 gaatctgggg caatggaatc actgcttcca gctggggcag gtgagatctt 2050
 tacgcctttt ataacatgcc atccctacta ataggatatt gacttgata 2100
 gcttgatgtc tcatgacgag cggcgctctg catccctcac ccatgcctcc 2150

taactcagtg atcaaagcga atattccatc tgtggataga acccctggca 2200
 gtgtgtcag ctcaacctgg tgggttcagt tctgtcctga ggcttctgct 2250
 ctcatcatt tagtgctacg ctgcacagtt ctacactgtc aagggaaaag 2300
 ggagactaat gaggcttaac tcaaaacctg ggogtggttt tggttgccat 2350
 tccatagggt tggagagctc tagatctctt ttgtgctggg ttcagtggct 2400
 cttcagggga caggaaatgc ctgtgtctgg ccagtgtggt tctggagctt 2450
 tggggtaaca gcaggatcca tcagtttagta ggggtgcatgt cagatgatca 2500
 tatccaattc atatggaagt cccgggtctg tcttcttat catcgggggtg 2550
 gcagctgggt ctcaatgtgc cagcagggac tcagtaoctg agcctcaatc 2600
 aagccttatc caccaaatac acagggaagg gtgatgcagg gaagggtgac 2650
 atcaggagtc agggcatgga ctggttaagat gaatactttg ctgggctgaa 2700
 gcaggctgca gggcattcca gccaaaggga cagcagggga cagtgcaggg 2750
 aggtgtgggg taaggagggg aagtcacatc agaaaaggga aagccacgga 2800
 atgtgtgtga agcccagaaa tggcatttgc agttaattag cacatgtgag 2850
 ggtagacag gtaggtgaat gcaagctcaa ggtttgaaa aatgactttt 2900
 cagttatgtc tttggtatca gacatacgaa aggtctcttt gtagttcgtg 2950
 ttaatgtaac attaataaat ttattgattc cattgcttta aaaaaaaaaa 3000
 aaaa 3004

<210> 113
 <211> 610
 <212> PRT
 <213> Homo sapiens

<400> 113
 Met Trp Leu Pro Leu Val Leu Leu Leu Ala Val Leu Leu Leu Ala
 1 5 10 15
 Val Leu Cys Lys Val Tyr Leu Gly Leu Phe Ser Gly Ser Ser Pro
 20 25 30
 Asn Pro Phe Ser Glu Asp Val Lys Arg Pro Pro Ala Pro Leu Val
 35 40 45
 Thr Asp Lys Glu Ala Arg Lys Lys Val Leu Lys Gln Ala Phe Ser
 50 55 60
 Ala Asn Gln Val Pro Glu Lys Leu Asp Val Val Val Ile Gly Ser
 65 70 75
 Gly Phe Gly Gly Leu Ala Ala Ala Ala Ile Leu Ala Lys Ala Gly
 80 85 90
 Lys Arg Val Leu Val Leu Glu Gln His Thr Lys Ala Gly Gly Cys
 95 100 105

Cys His Thr Phe Gly Lys Asn Gly Leu Glu Phe Asp Thr Gly Ile	110	115	120
His Tyr Ile Gly Arg Met Glu Glu Gly Ser Ile Gly Arg Phe Ile	125	130	135
Leu Asp Gln Ile Thr Glu Gly Gln Leu Asp Trp Ala Pro Leu Ser	140	145	150
Ser Pro Phe Asp Ile Met Val Leu Glu Gly Pro Asn Gly Arg Lys	155	160	165
Glu Tyr Pro Met Tyr Ser Gly Glu Lys Ala Tyr Ile Gln Gly Leu	170	175	180
Lys Glu Lys Phe Pro Gln Glu Glu Ala Ile Ile Asp Lys Tyr Ile	185	190	195
Lys Leu Val Lys Val Val Ser Ser Gly Ala Pro His Ala Ile Leu	200	205	210
Leu Lys Phe Leu Pro Leu Pro Val Val Gln Leu Leu Asp Arg Cys	215	220	225
Gly Leu Leu Thr Arg Phe Ser Pro Phe Leu Gln Ala Ser Thr Gln	230	235	240
Ser Leu Ala Glu Val Leu Gln Gln Leu Gly Ala Ser Ser Glu Leu	245	250	255
Gln Ala Val Leu Ser Tyr Ile Phe Pro Thr Tyr Gly Val Thr Pro	260	265	270
Asn His Ser Ala Phe Ser Met His Ala Leu Leu Val Asn His Tyr	275	280	285
Met Lys Gly Gly Phe Tyr Pro Arg Gly Gly Ser Ser Glu Ile Ala	290	295	300
Phe His Thr Ile Pro Val Ile Gln Arg Ala Gly Gly Ala Val Leu	305	310	315
Thr Lys Ala Thr Val Gln Ser Val Leu Leu Asp Ser Ala Gly Lys	320	325	330
Ala Cys Gly Val Ser Val Lys Lys Gly His Glu Leu Val Asn Ile	335	340	345
Tyr Cys Pro Ile Val Val Ser Asn Ala Gly Leu Phe Asn Thr Tyr	350	355	360
Glu His Leu Leu Pro Gly Asn Ala Arg Cys Leu Pro Gly Val Lys	365	370	375
Gln Gln Leu Gly Thr Val Arg Pro Gly Leu Gly Met Thr Ser Val	380	385	390
Phe Ile Cys Leu Arg Gly Thr Lys Glu Asp Leu His Leu Pro Ser	395	400	405
Thr Asn Tyr Tyr Val Tyr Tyr Asp Thr Asp Met Asp Gln Ala Met	410	415	420

Glu Arg Tyr Val	Ser Met Pro Arg Glu	Glu Ala Ala Glu His	Ile
	425	430	435
Pro Leu Leu Phe	Phe Ala Phe Pro Ser	Ala Lys Asp Pro Thr	Trp
	440	445	450
Glu Asp Arg Phe	Pro Gly Arg Ser Thr	Met Ile Met Leu Ile	Pro
	455	460	465
Thr Ala Tyr Glu	Trp Phe Glu Glu Trp	Gln Ala Glu Leu Lys	Gly
	470	475	480
Lys Arg Gly Ser	Asp Tyr Glu Thr Phe	Lys Asn Ser Phe Val	Glu
	485	490	495
Ala Ser Met Ser	Val Val Leu Lys Leu	Phe Pro Gln Leu Glu	Gly
	500	505	510
Lys Val Glu Ser	Val Thr Ala Gly Ser	Pro Leu Thr Asn Gln	Phe
	515	520	525
Tyr Leu Ala Ala	Pro Arg Gly Ala Cys	Tyr Gly Ala Asp His	Asp
	530	535	540
Leu Gly Arg Leu	His Pro Cys Val Met	Ala Ser Leu Arg Ala	Gln
	545	550	555
Ser Pro Ile Pro	Asn Leu Tyr Leu Thr	Gly Gln Asp Ile Phe	Thr
	560	565	570
Cys Gly Leu Val	Gly Ala Leu Gln Gly	Ala Leu Leu Cys Ser	Ser
	575	580	585
Ala Ile Leu Lys	Arg Asn Leu Tyr Ser	Asp Leu Lys Asn Leu	Asp
	590	595	600
Ser Arg Ile Arg	Ala Gln Lys Lys Lys	Asn	
	605	610	

<210> 114
 <211> 1701
 <212> DNA
 <213> Homo sapiens

<400> 114
 gcagcggcga ggcggcggtg gtggctgagt ccgtggtggc agaggcgaag 50
 ggcacagctc taggggttgg caccggcccc gagaggagga tgcgggtccg 100
 gatagggctg acgctgctgc tgtgtgcggt gctgctgagc ttggcctcgg 150
 cgtcctcggg tgaagaaggc agccaggatg aatccttaga ttccaagact 200
 actttgacat cagatgagtc agtaaaggac catactactg caggcagagt 250
 agttgctggt caaatatttc ttgattcaga agaattctgaa ttagaatcct 300
 ctattcaaga agaggaagac agcctcaaga gccaagaggg ggaaagtgtc 350
 acagaagata tcagctttct agagtctcca aatccagaaa acaaggacta 400
 tgaagagcca aagaaagtac ggaaaccagc ttgaccgcc attgaaggca 450

cagcacatgg ggagccctgc cacttccctt ttcttttctt agataaggag 500
tatgatgaat gtacatcaga tgggagggaa gatggcagac tgtggtgtgc 550
tacaacctat gactacaaag cagatgaaaa gtggggcttt tgtgaaactg 600
aagaagaggc tgctaagaga cggcagatgc aggaagcaga aatgatgtat 650
caaaactggaa tgaaaatcct taatggaagc aataagaaaa gccaaaaaag 700
agaagcatat cggatatctc aaaaggcagc aagcatgaac cataccaaag 750
ccctggagag agtgtcatat gctcttttat ttggtgatta cttgccacag 800
aatatccagg cagcgagaga gatgtttgag aagctgactg aggaaggctc 850
tcccaaggga cagactgctc ttggctttct gtatgcctct ggacttggtg 900
ttaattcaag tcaggcaaag gctcttgtat attatacatt tggagctctt 950
gggggcaatc taatagccca catggttttg gtaagtagac tttagtggaa 1000
ggctaataat attaacatca gaagaatttg tggtttatag cggccacaac 1050
tttttcagct ttcatgatcc agatttgctt gtattaagac caaatattca 1100
gttgaacttc cttcaaattc ttgttaatgg atataacaca tggaatctac 1150
atgtaaataa aagttgggtg agtcacacaa ttttctttaa aatgattagt 1200
ttggctgatt gccctaaaa agagagatct gataaatggc tctttttaaa 1250
ttttctctga gttggaattg tcagaatcat tttttacatt agattatcat 1300
aattttaaaa atttttcttt agtttttcaa aattttgtaa atgggtggcta 1350
tagaaaaaca acatgaaata ttatacaata ttttgcaaca atgccctaag 1400
aattgttaaa attcatggag ttatttgtgc agaagactc cagagagctc 1450
tactttctgt tttttacttt tcatgattgg ctgtcttccc atttattctg 1500
gtcattttatt gctagtgaca ctgtgcctgc ttccagtagt ctcattttcc 1550
ctattttgct aatttggtac tttttctttg ctaatttgga agattaactc 1600
atttttaata aaattatgtc taagattaaa aaaaaaaaaa aaaaaaaaaa 1650
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1700
a 1701

<210> 115
<211> 301
<212> PRT
<213> Homo sapiens

<400> 115
Met Arg Val Arg Ile Gly Leu Thr Leu Leu Leu Cys Ala Val Leu
1 5 10 15
Leu Ser Leu Ala Ser Ala Ser Ser Asp Glu Glu Gly Ser Gln Asp
20 25 30

Glu	Ser	Leu	Asp	Ser	Lys	Thr	Thr	Leu	Thr	Ser	Asp	Glu	Ser	Val
				35					40					45
Lys	Asp	His	Thr	Thr	Ala	Gly	Arg	Val	Val	Ala	Gly	Gln	Ile	Phe
				50					55					60
Leu	Asp	Ser	Glu	Glu	Ser	Glu	Leu	Glu	Ser	Ser	Ile	Gln	Glu	Glu
				65					70					75
Glu	Asp	Ser	Leu	Lys	Ser	Gln	Glu	Gly	Glu	Ser	Val	Thr	Glu	Asp
				80					85					90
Ile	Ser	Phe	Leu	Glu	Ser	Pro	Asn	Pro	Glu	Asn	Lys	Asp	Tyr	Glu
				95					100					105
Glu	Pro	Lys	Lys	Val	Arg	Lys	Pro	Ala	Leu	Thr	Ala	Ile	Glu	Gly
				110					115					120
Thr	Ala	His	Gly	Glu	Pro	Cys	His	Phe	Pro	Phe	Leu	Phe	Leu	Asp
				125					130					135
Lys	Glu	Tyr	Asp	Glu	Cys	Thr	Ser	Asp	Gly	Arg	Glu	Asp	Gly	Arg
				140					145					150
Leu	Trp	Cys	Ala	Thr	Thr	Tyr	Asp	Tyr	Lys	Ala	Asp	Glu	Lys	Trp
				155					160					165
Gly	Phe	Cys	Glu	Thr	Glu	Glu	Glu	Ala	Ala	Lys	Arg	Arg	Gln	Met
				170					175					180
Gln	Glu	Ala	Glu	Met	Met	Tyr	Gln	Thr	Gly	Met	Lys	Ile	Leu	Asn
				185					190					195
Gly	Ser	Asn	Lys	Lys	Ser	Gln	Lys	Arg	Glu	Ala	Tyr	Arg	Tyr	Leu
				200					205					210
Gln	Lys	Ala	Ala	Ser	Met	Asn	His	Thr	Lys	Ala	Leu	Glu	Arg	Val
				215					220					225
Ser	Tyr	Ala	Leu	Leu	Phe	Gly	Asp	Tyr	Leu	Pro	Gln	Asn	Ile	Gln
				230					235					240
Ala	Ala	Arg	Glu	Met	Phe	Glu	Lys	Leu	Thr	Glu	Glu	Gly	Ser	Pro
				245					250					255
Lys	Gly	Gln	Thr	Ala	Leu	Gly	Phe	Leu	Tyr	Ala	Ser	Gly	Leu	Gly
				260					265					270
Val	Asn	Ser	Ser	Gln	Ala	Lys	Ala	Leu	Val	Tyr	Tyr	Thr	Phe	Gly
				275					280					285
Ala	Leu	Gly	Gly	Asn	Leu	Ile	Ala	His	Met	Val	Leu	Val	Ser	Arg
				290					295					300

Leu

<210> 116
 <211> 584
 <212> DNA
 <213> Homo sapiens

<400> 116

cttcccagcc ctgtgccccca aagcacctgg agcatatagc cttgcagaac 50
 ttctacttgc ctgcctccct gcctctggcc atggcctgcc ggtgcctcag 100
 cttccttctg atggggacct tcctgtcagt ttcccagaca gtccctggccc 150
 agctggatgc actgctggtc ttcccaggcc aagtggctca actctcctgc 200
 acgctcagcc cccagcacgt caccatcagg gactacggtg tgccttggtg 250
 ccagcagcgg gcaggcagtg cccctcgata tctcctctac taccgctcgg 300
 aggaggatca ccaccggcct gctgacatcc ccgatcgatt ctcggcagcc 350
 aaggatgagg cccacaatgc ctgtgtcctc accattagtc ccgtgcagcc 400
 tgaagacgac gcggattact actgctctgt tggctacggc tttagtcctt 450
 aggggtgggg tgtgagatgg gtgcctcccc tctgcctccc atttctgccc 500
 ctgaccttgg gtcccttita aactttctct gagccttgct tcccctctgt 550
 aaaatgggtt aataatattc aacatgtcaa caac 584

<210> 117
 <211> 123
 <212> PRT
 <213> Homo sapiens

<400> 117
 Met Ala Cys Arg Cys Leu Ser Phe Leu Leu Met Gly Thr Phe Leu
 1 5 10 15
 Ser Val Ser Gln Thr Val Leu Ala Gln Leu Asp Ala Leu Leu Val
 20 25 30
 Phe Pro Gly Gln Val Ala Gln Leu Ser Cys Thr Leu Ser Pro Gln
 35 40 45
 His Val Thr Ile Arg Asp Tyr Gly Val Ser Trp Tyr Gln Gln Arg
 50 55 60
 Ala Gly Ser Ala Pro Arg Tyr Leu Leu Tyr Tyr Arg Ser Glu Glu
 65 70 75
 Asp His His Arg Pro Ala Asp Ile Pro Asp Arg Phe Ser Ala Ala
 80 85 90
 Lys Asp Glu Ala His Asn Ala Cys Val Leu Thr Ile Ser Pro Val
 95 100 105
 Gln Pro Glu Asp Asp Ala Asp Tyr Tyr Cys Ser Val Gly Tyr Gly
 110 115 120
 Phe Ser Pro

<210> 118
 <211> 3402
 <212> DNA
 <213> Homo sapiens

<400> 118

gccgccccgc cccgagaccg ggccccggggg cgcggggcgcg cgggatgcgg 50
 cccccggggc ggcatgacc gcggagcgca cgcgcggggc cgggccctga 100
 ccccgccgcc cgcccgctga gccccccgcc gaggtccgga caggccgaga 150
 tgacgccgag cccctgttg ctgctcctgc tgccgccgct gctgctgggg 200
 gccttccac cgcccgccgc cgcccgaggc ccccaaaga tggcggacaa 250
 ggtggtccca cggcagggtg cccggctggg ccgcactgtg cggctgcagt 300
 gccagtga gggggaccgc ccgcgcgtga ccatgtggac caaggatggc 350
 cgcaccatcc acagcggctg gagccgcttc cgcgtgctgc cgcaggggct 400
 gaaggatgaag cagggtggagc gggaggatgc cggcgtgtac gtgtgcaagg 450
 ccaccaacgc ctccggcagc ctgagcgta actacacct cgtcgtgctg 500
 gatgacatta gccagggaa ggagagcctg gggcccgaca gctcctctgg 550
 gggtaagag gaccccgcca gccagcagtg ggcacgacgc cgcttcacac 600
 agccctccaa gatgaggcgc cgggtgatcg cacggcccggt gggtagctcc 650
 gtgcggctca agtgcggtgc cagcgggcac cctcggcccg acatcacgtg 700
 gatgaaggac gaccaggcct tgacgcgccc agaggccgct gagcccagga 750
 agaagaagtg gacactgagc ctgaagaacc tgccggccgga ggacagcggc 800
 aaatacacct gccgcgtgtc gaaccgcgcg ggcgccatca acgccaccta 850
 caaggatgat gtgatccagc ggaccgcttc caagcccgtg ctccacaggca 900
 cgcaccccggt gaacacgacg gtggacttcg gggggaccac gtccttcacg 950
 tgcaagggtgc gcagcgacgt gaagccggtg atccagtggc tgaagcgcgt 1000
 ggagtacggc gccgagggcc gccacaactc caccatcgat gtgggcggcc 1050
 agaagtttgt ggtgctgccc acgggtgacg tgtggtcgcg gcccgacggc 1100
 tcctacctca ataagctgct catcaccggt gcccgccagg acgatgcggg 1150
 catgtacatc tgccttggcg ccaacaccat gggctacagc ttccgcagcg 1200
 ccttcctcac cgtgctgcca gacccaaaac cgccagggcc acctgtggcc 1250
 tcctcgtcct cggccactag cctgccgtgg ccggtgtca tcggcatccc 1300
 agccggcgct gtcttcatcc tgggcaccct gctcctgtgg ctttgccagg 1350
 cccagaagaa gccgtgcacc ccgcgcctg cccctcccct gcctgggcac 1400
 cccccgccgc ggacggcccc cgaccgcagc ggagacaagg acctccctc 1450
 gttggccgcc ctcagcgctg gccctggtgt ggggctgtgt gaggagcatg 1500
 ggtctccggc agccccccag cacttactgg gccagggccc agttgctggc 1550
 cctaagttgt accccaaact ctacacagac atccacacac acacacacac 1600

gaaggaagac tgggttgacag ggactgtggt ctctcctggg gcccgggacc 3250
 cgctgtgtct ttcagccatg ctgatgacca caccocgtcc aggccagaca 3300
 ccacccccca cccactgtc gtggtggccc cagatctctg taattttatg 3350
 tagagtttga gctgaagccc cgtatattta atttattttg ttaaacacaa 3400
 aa 3402

<210> 119
 <211> 504
 <212> PRT
 <213> Homo sapiens

<400> 119
 Met Thr Pro Ser Pro Leu Leu Leu Leu Leu Leu Pro Pro Leu Leu
 1 5 10 15
 Leu Gly Ala Phe Pro Pro Ala Ala Ala Ala Arg Gly Pro Pro Lys
 20 25 30
 Met Ala Asp Lys Val Val Pro Arg Gln Val Ala Arg Leu Gly Arg
 35 40 45
 Thr Val Arg Leu Gln Cys Pro Val Glu Gly Asp Pro Pro Pro Leu
 50 55 60
 Thr Met Trp Thr Lys Asp Gly Arg Thr Ile His Ser Gly Trp Ser
 65 70 75
 Arg Phe Arg Val Leu Pro Gln Gly Leu Lys Val Lys Gln Val Glu
 80 85 90
 Arg Glu Asp Ala Gly Val Tyr Val Cys Lys Ala Thr Asn Gly Phe
 95 100 105
 Gly Ser Leu Ser Val Asn Tyr Thr Leu Val Val Leu Asp Asp Ile
 110 115 120
 Ser Pro Gly Lys Glu Ser Leu Gly Pro Asp Ser Ser Ser Gly Gly
 125 130 135
 Gln Glu Asp Pro Ala Ser Gln Gln Trp Ala Arg Pro Arg Phe Thr
 140 145 150
 Gln Pro Ser Lys Met Arg Arg Arg Val Ile Ala Arg Pro Val Gly
 155 160 165
 Ser Ser Val Arg Leu Lys Cys Val Ala Ser Gly His Pro Arg Pro
 170 175 180
 Asp Ile Thr Trp Met Lys Asp Asp Gln Ala Leu Thr Arg Pro Glu
 185 190 195
 Ala Ala Glu Pro Arg Lys Lys Lys Trp Thr Leu Ser Leu Lys Asn
 200 205 210
 Leu Arg Pro Glu Asp Ser Gly Lys Tyr Thr Cys Arg Val Ser Asn
 215 220 225
 Arg Ala Gly Ala Ile Asn Ala Thr Tyr Lys Val Asp Val Ile Gln
 230 235 240

cgagatgacg ccgagccccc 20

<210> 121

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 121

cggttcgaca cgcggcaggt g 21

<210> 122

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 122

tgctgctcct gctgccgccg ctgctgctgg gggccttccc gccgg 45

<210> 123

<211> 4420

<212> DNA

<213> Homo sapiens

<400> 123

cccagctgag gagccctgct caagacacgg tcaactggatc tgagaaactt 50
cccaggggac cgcattccag agtcagtgc tctgtgaagc acccacatct 100
acctcttgcc acgttccac gggcttgggg gaaagatggt ggggaccaag 150
gcctgggtgt tctccttcct ggtcctggaa gtcacatctg tgttggggag 200
acagacgatg ctcaccagc cagtaagaag agtccagcct ggaagaaga 250
acccagcat ctttgccaag cctgccgaca ccctggagag ccctggtgag 300
tggaacaacat ggttcaacat cgactaccca ggcggaagg gcgactatga 350
gcggctggac gccattcgt tctactatgg ggaccgtgta tgtgccgctc 400
ccctgcggct agaggctcgg accactgact ggacacctgc gggcagcact 450
ggccaggtgg tccatggtag tcccctgag ggtttctggt gcctcaacag 500
ggagcagcgg cctggccaga actgctctaa ttacaccgta cgcttcctct 550
gccaccagg atccctgcgc cgagacacag agcgcatctg gagcccatgg 600
tctccctgga gcaagtgctc agctgcctgt ggtcagactg gggccagac 650
tcgcacacgc atttgcttg cagagatggt gtcgctgtgc agtgaggcca 700
gcgaagaggg tcagcactgc atgggccagg actgtacagc ctgtgacctg 750
acctgccccaa tgggccaggt gaatgctgac tgtgatgcct gcatgtgcca 800
ggacttcatg cttcatgggg ctgtctccct tcccggaggt gcccagcct 850

caggggctgc tatctacctc ctgaccaaga cgccgaagct gctgacccag 900
 acagacagtg atgggagatt ccgaatccct ggcttgtgcc ctgatggcaa 950
 aagcatcctg aagatcacaa aggtcaagtt tgccccatt gtactcacia 1000
 tgcccaagac tagcctgaag gcagccacca tcaaggcaga gtttgtgagg 1050
 gcagagactc catacatggt gatgaaccct gagacaaaag cacggagagc 1100
 tgggcagagc gtgtctctgt gctgtaaggc cacaggggaag cccaggccag 1150
 acaagtatth ttggtatcat aatgacacat tgctggatcc ttccctctac 1200
 aagcatgaga gcaagctggt gctgaggaaa ctgcagcagc accaggctgg 1250
 ggagtactth tgcaaggccc agagtgatgc tggggctgtg aagtccaagg 1300
 ttgccagct gattgtcaca gcatctgatg agactccttg caaccagtt 1350
 cctgagagct atcttatccg gctgccccat gattgctthc agaatgccac 1400
 caactccttc tactatgacg tgggacgctg ccctgttaag acttgtgcag 1450
 ggcagcagga taatgggatc aggtgccgtg atgctgtgca gaactgctgt 1500
 ggcattctca agacagagga aaggagatc cagtgcagtg gctacacgct 1550
 accaccaag gtggccaagg agtgcagctg ccagcgggtg acggaaactc 1600
 ggagcatcgt gcggggccgt gtcagtgtg ctgacaatgg ggagcccatg 1650
 cgctttggcc atgtgtacat ggggaacagc cgtgtaagca tgactggcta 1700
 caagggcact ttcaccctcc atgtcccca ggacactgag aggctggtgc 1750
 tcacatttgt ggacaggctg cagaagtttg tcaacaccac caaagtgcta 1800
 cctttcaaca agaaggggag tgccgtgttc catgaaatca agatgcttcg 1850
 tcggaaagag cccatcactt tggaagccat ggagaccaac atcatcccc 1900
 tgggggaagt ggttggtgaa gaccccatgg ctgaactgga gattccatcc 1950
 aggagtttct acaggcagaa tggggagccc tacataggaa aagtgaaggc 2000
 cagtgtgacc ttcctggatc cccggaatat ttccacagcc acagctgccc 2050
 agactgacct gaacttcac aatgacgaag gagacactth ccccttcgg 2100
 acgtatggca tgthctctgt ggacttcaga gatgaggta cctcagagcc 2150
 acttaatgct ggcaaagtga aggtccacct tgactcgacc caggtcaaga 2200
 tgccagagca catatccaca gtgaaactct ggtcactcaa tccagacaca 2250
 gggctgtggg aggaggaagg tgatttcaaa tttgaaaatc aaaggaggaa 2300
 caaaagagaa gacagaacct tcctggtggg caacctggag attcgtgaga 2350
 ggaggctctt taacctggat gttcctgaaa gcaggcgggtg ctttgtttaag 2400
 gtgagggcct accggagtga gaggttcttg cctagtgagc agatccaggg 2450

gggtgtgatc tccgtgatta acctggagcc tagaactggc ttcttgtcca 2500
 accctagggc ctggggccgc tttgacagtg tcatcacagg ccccaacggg 2550
 gcctgtgtgc ctgccttctg tgatgaccag tcccctgatg cctactctgc 2600
 ctatgtcttg gcaagcctgg ctggggagga actgcaagca gtggagtctt 2650
 ctccataaatt caacccaaat gcaattggcg tccctcagcc ctatctcaac 2700
 aagctcaact accgtcggac ggaccatgag gatccacggg ttaaaaagac 2750
 agctttccag attagcatgg ccaagccaag gcccaactca gctgaggaga 2800
 gcaatggggc catctatgcc tttgagaacc tccgggcatg tgaagaggca 2850
 ccaccagtg cagcccaactt ccggttctac cagattgagg gggatcgata 2900
 tgactacaac acagtcccct tcaacgaaga tgaccctatg agctggactg 2950
 aagactatct ggcatggtgg ccaaagccga tgggaattcag ggcctgctat 3000
 atcaagggtga agattgtggg gccactggaa gtgaatgtgc gatcccgcaa 3050
 catggggggc actcatcggc ggacagtggg gaagctgtat ggaatccgag 3100
 atgtgaggag cactcgggac agggaccagc ccaatgtctc agctgcctgt 3150
 ctggagttca agtgacgtgg gatgctctat gatcaggacc gtgtggaccg 3200
 caccctggtg aaggtcatcc ccagggcag ctgccgtoga gccagtgtga 3250
 accccatgct gcatgagtac ctggtcaacc acttgccact tgcagtcaac 3300
 aacgacacca gtgagtacac catgctggca cccttggaac cactgggcca 3350
 caactatggc atctacactg tcaactgacca ggaccctcgc acggccaagg 3400
 agatcgcgct cggccggtgc tttgatggca catccgatgg ctccctccaga 3450
 atcatgaaga gcaatgtggg agtagccctc accttcaact gtgtagagag 3500
 gcaagtaggc cgccagagtg ccttcagta cctccaaagc accccagccc 3550
 agtcccctgc tgcaggcact gtccaaggaa gagtgccctc gaggaggcag 3600
 cagcgagcga gcaggggtgg ccagcgccag ggtggagtgg tggcctctct 3650
 gagatttcct agagttgctc aacagcccct gatcaactaa gttttgtggt 3700
 acttcaccct cttctgcctt catttcatgt gacagccatt gtgagactga 3750
 tgcacaaact gtcacttggg taatttaagc acttctgttt tcgtgaattt 3800
 gcttgtttgt ttcttcatgc ctttacttac tttgtcccat gctactgatt 3850
 ggcacgtggc ccccaaatg gcacaataaa gccctttgt gaaactgttc 3900
 tttaaatgaa acacaagaaa ttggccactg gtaaaaactct gcagcttcaa 3950
 ctgtacttca tttaatgcca ttaatgcaaa tatacttcct cttctttttg 4000
 catggttttg cccacctctg caatagtgat aatctgatgc tgaagatcaa 4050

[illegible]

<400> 124														
Met	Val	Gly	Thr	Lys	Ala	Trp	Val	Phe	Ser	Phe	Leu	Val	Leu	Glu
1				5					10					15
Val	Thr	Ser	Val	Leu	Gly	Arg	Gln	Thr	Met	Leu	Thr	Gln	Ser	Val
				20					25					30
Arg	Arg	Val	Gln	Pro	Gly	Lys	Lys	Asn	Pro	Ser	Ile	Phe	Ala	Lys
				35					40					45
Pro	Ala	Asp	Thr	Leu	Glu	Ser	Pro	Gly	Glu	Trp	Thr	Thr	Trp	Phe
				50					55					60
Asn	Ile	Asp	Tyr	Pro	Gly	Gly	Lys	Gly	Asp	Tyr	Glu	Arg	Leu	Asp
				65					70					75
Ala	Ile	Arg	Phe	Tyr	Tyr	Gly	Asp	Arg	Val	Cys	Ala	Arg	Pro	Leu
				80					85					90
Arg	Leu	Glu	Ala	Arg	Thr	Thr	Asp	Trp	Thr	Pro	Ala	Gly	Ser	Thr
				95					100					105
Gly	Gln	Val	Val	His	Gly	Ser	Pro	Arg	Glu	Gly	Phe	Trp	Cys	Leu
				110					115					120
Asn	Arg	Glu	Gln	Arg	Pro	Gly	Gln	Asn	Cys	Ser	Asn	Tyr	Thr	Val
				125					130					135
Arg	Phe	Leu	Cys	Pro	Pro	Gly	Ser	Leu	Arg	Arg	Asp	Thr	Glu	Arg
				140					145					150
Ile	Trp	Ser	Pro	Trp	Ser	Pro	Trp	Ser	Lys	Cys	Ser	Ala	Ala	Cys
				155					160					165
Gly	Gln	Thr	Gly	Val	Gln	Thr	Arg	Thr	Arg	Ile	Cys	Leu	Ala	Glu
				170					175					180
Met	Val	Ser	Leu	Cys	Ser	Glu	Ala	Ser	Glu	Glu	Gly	Gln	His	Cys
				185					190					195
Met	Gly	Gln	Asp	Cys	Thr	Ala	Cys	Asp	Leu	Thr	Cys	Pro	Met	Gly
				200					205					210

Gln	Val	Asn	Ala	Asp	Cys	Asp	Ala	Cys	Met	Cys	Gln	Asp	Phe	Met	215	220	225
Leu	His	Gly	Ala	Val	Ser	Leu	Pro	Gly	Gly	Ala	Pro	Ala	Ser	Gly	230	235	240
Ala	Ala	Ile	Tyr	Leu	Leu	Thr	Lys	Thr	Pro	Lys	Leu	Leu	Thr	Gln	245	250	255
Thr	Asp	Ser	Asp	Gly	Arg	Phe	Arg	Ile	Pro	Gly	Leu	Cys	Pro	Asp	260	265	270
Gly	Lys	Ser	Ile	Leu	Lys	Ile	Thr	Lys	Val	Lys	Phe	Ala	Pro	Ile	275	280	285
Val	Leu	Thr	Met	Pro	Lys	Thr	Ser	Leu	Lys	Ala	Ala	Thr	Ile	Lys	290	295	300
Ala	Glu	Phe	Val	Arg	Ala	Glu	Thr	Pro	Tyr	Met	Val	Met	Asn	Pro	305	310	315
Glu	Thr	Lys	Ala	Arg	Arg	Ala	Gly	Gln	Ser	Val	Ser	Leu	Cys	Cys	320	325	330
Lys	Ala	Thr	Gly	Lys	Pro	Arg	Pro	Asp	Lys	Tyr	Phe	Trp	Tyr	His	335	340	345
Asn	Asp	Thr	Leu	Leu	Asp	Pro	Ser	Leu	Tyr	Lys	His	Glu	Ser	Lys	350	355	360
Leu	Val	Leu	Arg	Lys	Leu	Gln	Gln	His	Gln	Ala	Gly	Glu	Tyr	Phe	365	370	375
Cys	Lys	Ala	Gln	Ser	Asp	Ala	Gly	Ala	Val	Lys	Ser	Lys	Val	Ala	380	385	390
Gln	Leu	Ile	Val	Thr	Ala	Ser	Asp	Glu	Thr	Pro	Cys	Asn	Pro	Val	395	400	405
Pro	Glu	Ser	Tyr	Leu	Ile	Arg	Leu	Pro	His	Asp	Cys	Phe	Gln	Asn	410	415	420
Ala	Thr	Asn	Ser	Phe	Tyr	Tyr	Asp	Val	Gly	Arg	Cys	Pro	Val	Lys	425	430	435
Thr	Cys	Ala	Gly	Gln	Gln	Asp	Asn	Gly	Ile	Arg	Cys	Arg	Asp	Ala	440	445	450
Val	Gln	Asn	Cys	Cys	Gly	Ile	Ser	Lys	Thr	Glu	Glu	Arg	Glu	Ile	455	460	465
Gln	Cys	Ser	Gly	Tyr	Thr	Leu	Pro	Thr	Lys	Val	Ala	Lys	Glu	Cys	470	475	480
Ser	Cys	Gln	Arg	Cys	Thr	Glu	Thr	Arg	Ser	Ile	Val	Arg	Gly	Arg	485	490	495
Val	Ser	Ala	Ala	Asp	Asn	Gly	Glu	Pro	Met	Arg	Phe	Gly	His	Val	500	505	510
Tyr	Met	Gly	Asn	Ser	Arg	Val	Ser	Met	Thr	Gly	Tyr	Lys	Gly	Thr	515	520	525

Phe Thr Leu His Val	Pro Gln Asp Thr	Glu Arg Leu Val Leu Thr	530	535	540
Phe Val Asp Arg Leu	Gln Lys Phe Val	Asn Thr Thr Lys Val Leu	545	550	555
Pro Phe Asn Lys Lys	Gly Ser Ala Val	Phe His Glu Ile Lys Met	560	565	570
Leu Arg Arg Lys Glu	Pro Ile Thr Leu	Glu Ala Met Glu Thr Asn	575	580	585
Ile Ile Pro Leu Gly	Glu Val Val Gly	Glu Asp Pro Met Ala Glu	590	595	600
Leu Glu Ile Pro Ser	Arg Ser Phe Tyr	Arg Gln Asn Gly Glu Pro	605	610	615
Tyr Ile Gly Lys Val	Lys Ala Ser Val	Thr Phe Leu Asp Pro Arg	620	625	630
Asn Ile Ser Thr Ala	Thr Ala Ala Gln	Thr Asp Leu Asn Phe Ile	635	640	645
Asn Asp Glu Gly Asp	Thr Phe Pro Leu	Arg Thr Tyr Gly Met Phe	650	655	660
Ser Val Asp Phe Arg	Asp Glu Val Thr	Ser Glu Pro Leu Asn Ala	665	670	675
Gly Lys Val Lys Val	His Leu Asp Ser	Thr Gln Val Lys Met Pro	680	685	690
Glu His Ile Ser Thr	Val Lys Leu Trp	Ser Leu Asn Pro Asp Thr	695	700	705
Gly Leu Trp Glu Glu	Glu Gly Asp Phe	Lys Phe Glu Asn Gln Arg	710	715	720
Arg Asn Lys Arg Glu	Asp Arg Thr Phe	Leu Val Gly Asn Leu Glu	725	730	735
Ile Arg Glu Arg Arg	Leu Phe Asn Leu	Asp Val Pro Glu Ser Arg	740	745	750
Arg Cys Phe Val Lys	Val Arg Ala Tyr	Arg Ser Glu Arg Phe Leu	755	760	765
Pro Ser Glu Gln Ile	Gln Gly Val Val	Ile Ser Val Ile Asn Leu	770	775	780
Glu Pro Arg Thr Gly	Phe Leu Ser Asn	Pro Arg Ala Trp Gly Arg	785	790	795
Phe Asp Ser Val Ile	Thr Gly Pro Asn	Gly Ala Cys Val Pro Ala	800	805	810
Phe Cys Asp Asp Gln	Ser Pro Asp Ala	Tyr Ser Ala Tyr Val Leu	815	820	825
Ala Ser Leu Ala Gly	Glu Glu Leu Gln	Ala Val Glu Ser Ser Pro	830	835	840

Gln Arg Ala Ser Arg Gly Gly Gln Arg Gln Gly Gly Val Val Ala
 1160 1165 1170

Ser Leu Arg Phe Pro Arg Val Ala Gln Gln Pro Leu Ile Asn
 1175 1180

<210> 125
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 125
 ctggtgcctc aacagggagc ag 22

<210> 126
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 126
 ccattgtgca ggtcaggtca cag 23

<210> 127
 <211> 40
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 127
 ctggagcaag tgctcagctg cctgtgggtca gactgggggc 40

<210> 128
 <211> 2819
 <212> DNA
 <213> Homo sapiens

<400> 128
 ctgcaagttg ttaacgccta acacacaagt atgttaggct tccaccaaag 50
 tcctcaatat acctgaatac gcacaatatc ttaactcttc atatttggtt 100
 ttgggatctg ctttgaggtc ccatcttcat ttaaaaaaaaa atacagagac 150
 ctacctaccc gtacgcatac atacatatgt gtatatatat gtaaactaga 200
 caaagatcgc agatcataaa gcaagctctg ctttagtttc caagaagatt 250
 acaaagaatt tagagatgta tttgtcaaga tccctgtcga ttcatgccct 300
 ttggggttacg gtgtcctcag tgatgcagcc ctaccctttg gtttggggac 350
 attatgattt gtgtaagact cagattttaca cggaagaagg gaaagtttgg 400
 gattacatgg cctgccagcc ggaatccacg gacatgacaa aatatctgaa 450

agtgaaactc gatcctccgg atattacctg tggagaccct cctgagacgt 500
 tctgtgcaat gggcaatccc tacatgtgca ataatgagtg tgatgagagt 550
 acccctgagc tggcacaccc cctgagctg atgtttgatt ttgaaggaag 600
 acatccctcc acattttggc agtctgccac ttggaaggag tatcccaagc 650
 ctctccaggt taacatcact ctgtcttggg gcaaaaccat tgagctaaca 700
 gacaacatag ttattacctt tgaatctggg cgtccagacc aaatgatcct 750
 ggagaagtct ctcgattatg gacgaacatg gcagccctat cagtattatg 800
 ccacagactg cttagatgct tttcacatgg atcctaaatc cgtgaaggat 850
 ttatcacagc atacggtctt agaaatcatt tgcacagaag agtactcaac 900
 aggttataca acaaatagca aaataatcca ctttgaaatc aaagacaggt 950
 tcgcgctttt tgctggacct cgcctacgca atatggcttc cctctacgga 1000
 cagctggata caaccaagaa actcagagat ttcttttacag tcacagacct 1050
 gaggataagg ctgttaagac cagccgttgg ggaaatattt gtagatgagc 1100
 tacacttggc acgctacttt tacgcgatct cagacataaa ggtgagagga 1150
 aggtgcaagt gtaatctcca tgccactgta tgtgtgtatg acaacagcaa 1200
 attgacatgc gaatgtgagc acaacactac aggtccagac tgtgggaaat 1250
 gcaagaagaa ttatcagggc cgaccttggg gtccaggctc ctatctcccc 1300
 atcccccagg gcaactgaaa tacctgtatc cccagtattt ccagtattgg 1350
 tacgaatgtc tgcgacaacg agctcctgca ctgccagaac ggagggagct 1400
 gccacaacaa cgtgcgctgc ctgtgcccgg ccgcatacac gggcatcctc 1450
 tgcgagaagc tgcggtgcga ggaggctggc agctgcggct ccgactctgg 1500
 ccagggcgcg ccccgccagc gcacccagc gctgctgctg ctgaccacgc 1550
 tgctgggaac cgccagcccc ctggtgttct aggtgtcacc tccagccaca 1600
 ccggacgggc ctgtgccgtg gggaagcaga cacaacccaa acatttgcta 1650
 ctaacatagg aaacacacac atacagacac cccactcag acagtgtaca 1700
 aactaagaag gcctaactga actaagccat atttatcacc cgtggacagc 1750
 acatccgagt caagactggt aatttctgac tccagaggag ttggcagctg 1800
 ttgatattat cactgcaaat cacattgcca gctgcagagc atattgtgga 1850
 ttggaaaggc tgcgacagcc ccccaaacag gaaagacaaa aaacaaacaa 1900
 atcaaccgac ctaaaaacat tggctactct agcgtggtgc gccctagtac 1950
 gactccgccc agtgtgtgga ccaaccaa at agcattcttt gctgtcaggt 2000
 gcattgtggg cataaggaaa tctgttacaa gctgcatat tggcctgctt 2050

	125		130		135
Leu Ser Trp Ser	Lys Thr Ile Glu Leu	Thr Asp Asn Ile Val	Ile		
	140	145	150		
Thr Phe Glu Ser	Gly Arg Pro Asp Gln	Met Ile Leu Glu Lys	Ser		
	155	160	165		
Leu Asp Tyr Gly	Arg Thr Trp Gln Pro	Tyr Gln Tyr Tyr Ala	Thr		
	170	175	180		
Asp Cys Leu Asp	Ala Phe His Met Asp	Pro Lys Ser Val Lys	Asp		
	185	190	195		
Leu Ser Gln His	Thr Val Leu Glu Ile	Ile Cys Thr Glu Glu	Tyr		
	200	205	210		
Ser Thr Gly Tyr	Thr Thr Asn Ser Lys	Ile Ile His Phe Glu	Ile		
	215	220	225		
Lys Asp Arg Phe	Ala Leu Phe Ala Gly	Pro Arg Leu Arg Asn	Met		
	230	235	240		
Ala Ser Leu Tyr	Gly Gln Leu Asp Thr	Thr Lys Lys Leu Arg	Asp		
	245	250	255		
Phe Phe Thr Val	Thr Asp Leu Arg Ile	Arg Leu Leu Arg Pro	Ala		
	260	265	270		
Val Gly Glu Ile	Phe Val Asp Glu Leu	His Leu Ala Arg Tyr	Phe		
	275	280	285		
Tyr Ala Ile Ser	Asp Ile Lys Val Arg	Gly Arg Cys Lys Cys	Asn		
	290	295	300		
Leu His Ala Thr	Val Cys Val Tyr Asp	Asn Ser Lys Leu Thr	Cys		
	305	310	315		
Glu Cys Glu His	Asn Thr Thr Gly Pro	Asp Cys Gly Lys Cys	Lys		
	320	325	330		
Lys Asn Tyr Gln	Gly Arg Pro Trp Ser	Pro Gly Ser Tyr Leu	Pro		
	335	340	345		
Ile Pro Lys Gly	Thr Ala Asn Thr Cys	Ile Pro Ser Ile Ser	Ser		
	350	355	360		
Ile Gly Thr Asn	Val Cys Asp Asn Glu	Leu Leu His Cys Gln	Asn		
	365	370	375		
Gly Gly Thr Cys	His Asn Asn Val Arg	Cys Leu Cys Pro Ala	Ala		
	380	385	390		
Tyr Thr Gly Ile	Leu Cys Glu Lys Leu	Arg Cys Glu Glu Ala	Gly		
	395	400	405		
Ser Cys Gly Ser	Asp Ser Gly Gln Gly	Ala Pro Pro His Gly	Thr		
	410	415	420		
Pro Ala Leu Leu	Leu Leu Thr Thr Leu	Leu Gly Thr Ala Ser	Pro		
	425	430	435		
Leu Val Phe					

<210> 130
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 130
tcgattatgg acgaacatgg cagc 24

<210> 131
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 131
ttctgagatc cctcatcctc 20

<210> 132
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 132
aggttcaggg acagcaagtt tggg 24

<210> 133
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 133
tttgctggac ctcggtacg gaattggctt ccctctacgg acagctggat 50

<210> 134
<211> 1493
<212> DNA
<213> Homo sapiens

<400> 134
cccacgcgtc cgggtgacct gggccgagcc ctcccggtcg gctaagattg 50
ctgaggaggc ggcgggtagc tggcaggcgc cgacttcoga aggccgccgt 100
ccgggcgagg tgtcctcatg acttctcttg tggaccatgt cegtgatctt 150
ttttgcctgc gtggtacggg taagggatgg actgcccctc tcagcctcta 200
ctgattttta ccacacccaa gatttttttg aatggaggag acggctcaag 250
agtttagcct tgcgactggc ccagtatcca ggctcaggtt ctgcagaagg 300

ttgtgacttt agtatacatt tttcttcttt cggggacgtg gcctgcatgg 350
ctatctgctc ctgccagtgt ccagcagcca tggccttctg cttcctggag 400
accctgtggt gggaattcac agcttcctat gacactacct gcattggcct 450
agcctccagg ccatacgctt ttcttgagtt tgacagcatc attcagaaaag 500
tgaagtggca ttttaactat gtaagttcct ctcagatgga gtgcagcttg 550
gaaaaaattc aggaggagct caagttgcag cctccagcgg ttctcactct 600
ggaggacaca gatgtggcaa atgggggtgat gaatgggtcac acaccgatgc 650
acttgagacc tgctcctaatt ttccgaatgg aaccagtgc agccctgggt 700
atcctctccc tcattctcaa catcatgtgt gctgccctga atctcattcg 750
aggagtccac cttgcagaac attctttaca ggatccaagg agctggttct 800
gctggttggc ccaaacctcg tgagccagcc acccctgacc caaatgagga 850
gagctctgat tctcccatcc gggagcagtg atgtcaaact tctgctgctg 900
gggaaatctc atcagcaggg agcctgtgga aaagggcatg tcagtgaaat 950
ctgggaatgg ctggattcgg aaacatctgc ccatgtgtat tgatggcaga 1000
gctgttgccc acaagcgcct tttatttagg gtaaaattaa caaatccatt 1050
ctattcctct gacctatgct tagtacatat gacctttaac cttacattt 1100
atatgattct ggggttgctt cagaagtgtt atttcatgaa tcattcatat 1150
gatttgatcc ccaggatcc tattttgttt aatgggcttt tctactaaaa 1200
gcataaaata ctgaggctga tttagtcagg gcaaaaccat ttactttaca 1250
tattcgtttt caatacttgc tgttcatgtt acacaagctt cttacggttt 1300
tcttgtaaca ataaatatit tgagtaaata atgggtacat ttttaacaaac 1350
tcagtagtac aacctaaact tgtataaaag tgtgtaaaaa tgtatagcca 1400
tttatatcct atgtataaat taaatgaggt ggcttcagaa atggcagaat 1450
aatctaaag tgtttattaa aaaaaaaaaa aaaaaaaaaa aag 1493

<210> 135
<211> 228
<212> PRT
<213> Homo sapiens

<400> 135
Met Ser Val Ile Phe Phe Ala Cys Val Val Arg Val Arg Asp Gly
1 5 10 15
Leu Pro Leu Ser Ala Ser Thr Asp Phe Tyr His Thr Gln Asp Phe
20 25 30
Leu Glu Trp Arg Arg Arg Leu Lys Ser Leu Ala Leu Arg Leu Ala
35 40 45

Gln	Tyr	Pro	Gly	Arg	Gly	Ser	Ala	Glu	Gly	Cys	Asp	Phe	Ser	Ile	
				50					55					60	
His	Phe	Ser	Ser	Phe	Gly	Asp	Val	Ala	Cys	Met	Ala	Ile	Cys	Ser	
				65					70					75	
Cys	Gln	Cys	Pro	Ala	Ala	Met	Ala	Phe	Cys	Phe	Leu	Glu	Thr	Leu	
				80					85					90	
Trp	Trp	Glu	Phe	Thr	Ala	Ser	Tyr	Asp	Thr	Thr	Cys	Ile	Gly	Leu	
				95					100					105	
Ala	Ser	Arg	Pro	Tyr	Ala	Phe	Leu	Glu	Phe	Asp	Ser	Ile	Ile	Gln	
				110					115					120	
Lys	Val	Lys	Trp	His	Phe	Asn	Tyr	Val	Ser	Ser	Ser	Gln	Met	Glu	
				125					130					135	
Cys	Ser	Leu	Glu	Lys	Ile	Gln	Glu	Glu	Leu	Lys	Leu	Gln	Pro	Pro	
				140					145					150	
Ala	Val	Leu	Thr	Leu	Glu	Asp	Thr	Asp	Val	Ala	Asn	Gly	Val	Met	
				155					160					165	
Asn	Gly	His	Thr	Pro	Met	His	Leu	Glu	Pro	Ala	Pro	Asn	Phe	Arg	
				170					175					180	
Met	Glu	Pro	Val	Thr	Ala	Leu	Gly	Ile	Leu	Ser	Leu	Ile	Leu	Asn	
				185					190					195	
Ile	Met	Cys	Ala	Ala	Leu	Asn	Leu	Ile	Arg	Gly	Val	His	Leu	Ala	
				200					205					210	
Glu	His	Ser	Leu	Gln	Asp	Pro	Arg	Ser	Trp	Phe	Cys	Trp	Leu	Asp	
				215					220					225	
Gln	Thr	Ser													

<210> 136
 <211> 239
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 39, 61, 143, 209
 <223> unknown base

<400> 136
 tgcttcctgg agaccctgtg gtgggaattc acagcttcnt atgacactac 50
 ctgcattggc ntagcctcca ggccatacgc ttttcttgag tttgacagca 100
 tcattcagaa agtgaagtgg cattttaact atgtaagttc ctntcagatg 150
 gagtgcagct tggaaaaaat tcaggaggag ctcaagttgc agcctccagc 200
 ggttctcant atggaggaca cagatgtggc aaatgggggt 239

<210> 137
 <211> 2300
 <212> DNA

<213> Homo sapiens

<400> 137

ctcagcggcg cttcctcgta gcgagcctag tggcgggtgt ttgcattgaa 50
acgtgagcgc gacccgacct taaagagtgg ggagcaaagg gaggacagag 100
ccctttaaaa cgaggcgggt ggtgcctgcc cctttaaggg cggggcgtcc 150
ggacgactgt atctgagccc cagactgccc cgagtttctg tcgcaggctg 200
cgaggaaagg cccctaggtt ggtgtcgggt gcttggcggc ggcggcttcc 250
tccccgctcg tcctccccgg gccagaggc acctcggtt cagtcatgct 300
gagcagagta tggaagcacc tgactacgaa gtgctatccg tgcgagaaca 350
gctattccac gagaggatcc gcgagtgtat tatatcaaca cttctgtttg 400
caacactgta catcctctgc cacatcttcc tgaccgctt caagaagcct 450
gctgagttca ccacagtga tgatgaagat gccaccgtca acaagattgc 500
gctcgagctg tgcaccttta ccctggcaat tgccctgggt gctgtcctgc 550
tcctgccctt ctccatcatc agcaatgagg tgctgctctc cctgcctcgg 600
aactactaca tccagtggct caacggctcc ctcatocatg gcctctggaa 650
ccttgttttt ctcttcccca acctgtccct catcttctc atgccctttg 700
catatttctt cactgagtct gagggctttg ctggctccag aaaggggtgc 750
ctgggccggg tctatgagac agtggtgatg ttgatgctcc tcaactctgt 800
ggtgctaggt atggtgtggg tggcatcagc cattgtggac aagaacaagg 850
ccaacagaga gtcactctat gacttttggg agtactatct cccctacctc 900
tactcatgca tctccttctt tggggttctg ctgctcctgg tgtgtactcc 950
actgggtctc gcccgcatgt tctccgtcac tgggaagctg ctagtcaagc 1000
cccggctgct ggaagacctg gaggagcagc tgtactgctc agcctttgag 1050
gaggcagccc tgaccgcag gatctgtaat cctacttctt gctggctgcc 1100
tttagacatg gagctgctac acagacaggt cctggctctg cagacacaga 1150
gggtcctgct ggagaagagg cggaaggctt cagcctggca acggaacctg 1200
ggctaccccc tggctatgct gtgcttgctg gtgctgacgg gcctgtctgt 1250
gctcattgtg gccatccaca tcctggagct gctcatcgat gaggctgcca 1300
tgccccgagg catgcagggt acctccttag gccaggctct cttctccaag 1350
ctgggctcct ttgggtgccg cattcagggt gtactcatct tttaoctaat 1400
ggtgtcctca gttgtgggt tctatagctc tccactcttc cggagcctgc 1450
ggcccagatg gcacgacact gccatgacgc agataattgg gaactgtgtc 1500

tgtctcctgg tcctaagctc agcaacttct gtctttctctc gaaccctggg 1550
gctcactcgc tttgacctgc tgggtgactt tggacgcttc aactggctgg 1600
gcaatttcta cattgtgttc ctctacaacg cagcctttgc aggctcacc 1650
acactctgtc tgggtgaagac cttcactgca gctgtgcggg cagagctgat 1700
ccgggccttt gggctggaca gactgccgct gcccgtctcc ggtttcccc 1750
aggcatctag gaagaccag caccagtgc ctccagctgg ggggtgggaag 1800
gaaaaaactg gacactgcc tctgctgcct aggcctggag ggaagccaa 1850
ggctacttgg acctcaggac ctggaatctg agaggggtggg tggcagaggg 1900
gagcagagcc atctgcacta ttgcataatc tgagccagag tttgggacca 1950
ggacctcctg cttttccata cttaactgtg gcctcagcat ggggtagggc 2000
tgggtgactg ggtctagccc ctgatcccaa atctgtttac acatcaatct 2050
gcctcactgc tgttctgggc catccccata gccatgttta catgatttga 2100
tgtgcaatag ggtggggtag gggcaggaa aggactgggc cagggcaggc 2150
tcgggagata gattgtctcc cttgcctctg gccagcaga gcctaagcac 2200
tgtgctatcc tggaggggct ttggaccacc tgaaagacca aggggatagg 2250
gaggaggagg cttcagccat cagcaataaa gttgatcca gggaaaaaaa 2300

<210> 138
<211> 489
<212> PRT
<213> Homo sapiens

<400> 138
Met Glu Ala Pro Asp Tyr Glu Val Leu Ser Val Arg Glu Gln Leu
1 5 10 15
Phe His Glu Arg Ile Arg Glu Cys Ile Ile Ser Thr Leu Leu Phe
20 25 30
Ala Thr Leu Tyr Ile Leu Cys His Ile Phe Leu Thr Arg Phe Lys
35 40 45
Lys Pro Ala Glu Phe Thr Thr Val Asp Asp Glu Asp Ala Thr Val
50 55 60
Asn Lys Ile Ala Leu Glu Leu Cys Thr Phe Thr Leu Ala Ile Ala
65 70 75
Leu Gly Ala Val Leu Leu Leu Pro Phe Ser Ile Ile Ser Asn Glu
80 85 90
Val Leu Leu Ser Leu Pro Arg Asn Tyr Tyr Ile Gln Trp Leu Asn
95 100 105
Gly Ser Leu Ile His Gly Leu Trp Asn Leu Val Phe Leu Phe Pro
110 115 120
Asn Leu Ser Leu Ile Phe Leu Met Pro Phe Ala Tyr Phe Phe Thr

125										130					135				
Glu	Ser	Glu	Gly	Phe	Ala	Gly	Ser	Arg	Lys	Gly	Val	Leu	Gly	Arg					
				140					145					150					
Val	Tyr	Glu	Thr	Val	Val	Met	Leu	Met	Leu	Leu	Thr	Leu	Leu	Val					
				155					160					165					
Leu	Gly	Met	Val	Trp	Val	Ala	Ser	Ala	Ile	Val	Asp	Lys	Asn	Lys					
				170					175					180					
Ala	Asn	Arg	Glu	Ser	Leu	Tyr	Asp	Phe	Trp	Glu	Tyr	Tyr	Leu	Pro					
				185					190					195					
Tyr	Leu	Tyr	Ser	Cys	Ile	Ser	Phe	Leu	Gly	Val	Leu	Leu	Leu	Leu					
				200					205					210					
Val	Cys	Thr	Pro	Leu	Gly	Leu	Ala	Arg	Met	Phe	Ser	Val	Thr	Gly					
				215					220					225					
Lys	Leu	Leu	Val	Lys	Pro	Arg	Leu	Leu	Glu	Asp	Leu	Glu	Glu	Gln					
				230					235					240					
Leu	Tyr	Cys	Ser	Ala	Phe	Glu	Glu	Ala	Ala	Leu	Thr	Arg	Arg	Ile					
				245					250					255					
Cys	Asn	Pro	Thr	Ser	Cys	Trp	Leu	Pro	Leu	Asp	Met	Glu	Leu	Leu					
				260					265					270					
His	Arg	Gln	Val	Leu	Ala	Leu	Gln	Thr	Gln	Arg	Val	Leu	Leu	Glu					
				275					280					285					
Lys	Arg	Arg	Lys	Ala	Ser	Ala	Trp	Gln	Arg	Asn	Leu	Gly	Tyr	Pro					
				290					295					300					
Leu	Ala	Met	Leu	Cys	Leu	Leu	Val	Leu	Thr	Gly	Leu	Ser	Val	Leu					
				305					310					315					
Ile	Val	Ala	Ile	His	Ile	Leu	Glu	Leu	Leu	Ile	Asp	Glu	Ala	Ala					
				320					325					330					
Met	Pro	Arg	Gly	Met	Gln	Gly	Thr	Ser	Leu	Gly	Gln	Val	Ser	Phe					
				335					340					345					
Ser	Lys	Leu	Gly	Ser	Phe	Gly	Ala	Val	Ile	Gln	Val	Val	Leu	Ile					
				350					355					360					
Phe	Tyr	Leu	Met	Val	Ser	Ser	Val	Val	Gly	Phe	Tyr	Ser	Ser	Pro					
				365					370					375					
Leu	Phe	Arg	Ser	Leu	Arg	Pro	Arg	Trp	His	Asp	Thr	Ala	Met	Thr					
				380					385					390					
Gln	Ile	Ile	Gly	Asn	Cys	Val	Cys	Leu	Leu	Val	Leu	Ser	Ser	Ala					
				395					400					405					
Leu	Pro	Val	Phe	Ser	Arg	Thr	Leu	Gly	Leu	Thr	Arg	Phe	Asp	Leu					
				410					415					420					
Leu	Gly	Asp	Phe	Gly	Arg	Phe	Asn	Trp	Leu	Gly	Asn	Phe	Tyr	Ile					
				425					430					435					
Val	Phe	Leu	Tyr	Asn	Ala	Ala	Phe	Ala	Gly	Leu	Thr	Thr	Leu	Cys					

440	445	450
Leu Val Lys Thr Phe Thr Ala Ala Val Arg Ala Glu Leu Ile Arg		
455	460	465
Ala Phe Gly Leu Asp Arg Leu Pro Leu Pro Val Ser Gly Phe Pro		
470	475	480
Gln Ala Ser Arg Lys Thr Gln His Gln		
485		

<210> 139
 <211> 294
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 53, 57
 <223> unknown base

<400> 139
 ggctgccgag ggaaggcccc ttgggttggt cttggttgct tggcggcggc 50
 ggnttcntcc ccgctcgtcc tccccgggcc cagaggcacc tcggcttcag 100
 tcatgctgag cagagtatgg aagcacctga ctacgaagtg ctatccgtgc 150
 gagaacagct attccacgag aggatccgcg agtgtattat atcaaacatt 200
 ctgtttgcaa cactgtacat cctctgccac atcttcctga cccgcttcaa 250
 gaagcctgct gagttcacca cagtggatga tgaagatgcc accg 294

<210> 140
 <211> 526
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 197, 349
 <223> unknown base

<400> 140
 gaccgacctt aaagagtggg agcaaaggga ggacagagcc ttttaaaacg 50
 aggcggtggt gcctgccctt taagggcggg gcgtccggac gactgtatct 100
 gagccccaga ctgccccgag tttctgtcgc aggctgcgag gaaaggcccc 150
 taggctgggt ctggtgcttg gcggcggcgg cttcctcccc gttgtcntcc 200
 ccgggcccag aggcacctcg gcttcagtca tgctgagcag agtatggaag 250
 cacctgacta cgaagtgcta tccgtgcgag aacagctatt ccacgagagg 300
 atccgcgagt gtattatata aacattctg tttgcaacac tgtacatcnt 350
 ctgccacatc ttctgacctt gcttcaagaa gcctgctgag ttcaccacag 400
 tggatgatga agatgccacc gtcaacaaga ttgcgctcga gctgtgcacc 450

tttaccctgg caattgccct gggtgctgtc ctgctcctgc ccttctccat 500
catcagcaat gaggtgctgc actccc 526

<210> 141
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 141
gactgtatct gagccccaga ctgc 24

<210> 142
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 142
tcagcaatga ggtgctgctc 20

<210> 143
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 143
tgaggaagat gagggacagg ttgg 24

<210> 144
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 144
tatggaagca cctgactacg aagtgcctatc cgtgcgagaa cagctattcc 50

<210> 145
<211> 685
<212> DNA
<213> Homo sapiens

<400> 145
gatgtgctcc ttggagctgg tgtgcagtgt cctgactgta agatcaagtc 50
caaacctgtt ttggaattga ggaaacttct cttttgatct cagcccttgg 100
tgggtccaggt cttcatgctg ctgtgggtga tattactggg cctggctcct 150
gtcagtggac agtttgcaag gacaccacag cccattatct tctocagcc 200
tccatggacc acagtcttcc aaggagagag agtgaccctc acttgcaagg 250

gatttcgctt ctactcacca cagaaaacaa aatggtacca tcggtacctt 300
 gggaaagaaa tactaagaga aaccccagac aatatccttg aggttcagga 350
 atctggagag tacagatgcc aggcccaggg ctccccctctc agtagccctg 400
 tgcacttgga tttttcttca gagatgggat ttcctcatgc tgcccaggct 450
 aatgttgaac tcctgggctc aagtgatctg ctcacctagg cctctcaaag 500
 cgctgggatt acagcttcgc tgatcctgca agctccactt tctgtgtttg 550
 aaggagactc tgtggttctg aggtgccggg caaaggcgga agtaacactg 600
 aataatacta tttaacaaga tgataatgtc ctggcattcc ttaataaaaag 650
 aactgacttc caaaaaaaaaa aaaaaaaaaa aaaaaa 685

<210> 146
 <211> 124
 <212> PRT
 <213> Homo sapiens

<400> 146
 Met Leu Leu Trp Val Ile Leu Leu Val Leu Ala Pro Val Ser Gly
 1 5 10 15
 Gln Phe Ala Arg Thr Pro Arg Pro Ile Ile Phe Leu Gln Pro Pro
 20 25 30
 Trp Thr Thr Val Phe Gln Gly Glu Arg Val Thr Leu Thr Cys Lys
 35 40 45
 Gly Phe Arg Phe Tyr Ser Pro Gln Lys Thr Lys Trp Tyr His Arg
 50 55 60
 Tyr Leu Gly Lys Glu Ile Leu Arg Glu Thr Pro Asp Asn Ile Leu
 65 70 75
 Glu Val Gln Glu Ser Gly Glu Tyr Arg Cys Gln Ala Gln Gly Ser
 80 85 90
 Pro Leu Ser Ser Pro Val His Leu Asp Phe Ser Ser Glu Met Gly
 95 100 105
 Phe Pro His Ala Ala Gln Ala Asn Val Glu Leu Leu Gly Ser Ser
 110 115 120
 Asp Leu Leu Thr

<210> 147
 <211> 1621
 <212> DNA
 <213> Homo sapiens

<400> 147
 cagaagaggg ggctagctag ctgtctctgc ggaccaggga gacccccgcg 50
 cccccccggt gtgaggcggc ctcacagggc cggtggtggt ggcgagccga 100
 cgcggcggcg gaggaggctg tgaggagtgt gtggaacagg acccgggaca 150

gaggaaccat ggctccgcag aacctgagca ccttttgcct gttgctgcta 200
 tacctcatcg gggcggtgat tgccggacga gatttctata agatcttggg 250
 ggtgcctcga agtgcctcta taaaggatat taaaaaggcc tataggaaac 300
 tagccctgca gcttcatccc gaccggaacc ctgatgatcc acaagcccag 350
 gagaaattcc aggatctggg tgctgcttat gaggttctgt cagatagtga 400
 gaaacggaaa cagtacgata cttatggtga agaaggatta aaagatggtc 450
 atcagagctc ccatggagac attttttcac acttctttgg ggattttgg 500
 ttcatgtttg gaggaacccc tcgtcagcaa gacagaaata ttccaagagg 550
 aagtgatatt attgtagatc tagaagtcac tttggaagaa gtatatgcag 600
 gaaattttgt ggaagtagtt agaaacaaac ctgtggcaag gcaggctcct 650
 ggcaaacgga agtgcaattg tcggcaagag atgcggaacca cccagctggg 700
 ccctgggctc ttccaaatga cccaggagggt ggtctgcgac gaatgcccta 750
 atgtcaaaact agtgaatgaa gaacgaacgc tggaagtaga aatagagcct 800
 ggggtgagag acggcatgga gtaccccttt attggagaag gtgagcctca 850
 cgtggatggg gagcctggag atttacgggt ccgaatcaaa gttgtcaagc 900
 acccaatatt tgaaaggaga ggagatgatt tgtacacaaa tgtgacaatc 950
 tcattagtgt agtcactggt tggttttgag atggatatta ctacttgga 1000
 tggtcacaag gtacatatct cccgggataa gatcaccagg ccaggagcga 1050
 agctatggaa gaaaggggaa gggctcccca actttgacaa caacaatatc 1100
 aagggctctt tgataatcac ttttgatgtg gattttccaa aagaacagtt 1150
 aacagaggaa gcgagagaag gtatcaaaca gctactgaaa caagggtcag 1200
 tgcagaaggt atacaatgga ctgcaaggat attgagagtg aataaaattg 1250
 gactttgttt aaaataagtg aataagcgat atttattatc tgcaagggtt 1300
 ttttgtgtgt gttttgttt ttattttcaa tatgcaagtt aggtttaatt 1350
 tttttatcta atgatcatca tgaaatgaat aagagggtt aagaatttgt 1400
 ccatttgcac tcggaaaaga atgaccagca aaagggttac taatacctct 1450
 ccctttgggg atttaatgtc tgggtgctgcc gcctgagttt caagaattaa 1500
 agctgcaaga ggactccagg agcaaaagaa acacaatata gaggggttga 1550
 gttgttagca atttcattca aaatgccaac tggagaagtc tgttttttaa 1600
 tacattttgt tgttattttt a 1621

<210> 148
 <211> 358
 <212> PRT

<213> Homo sapiens

<400> 148

Met	Ala	Pro	Gln	Asn	Leu	Ser	Thr	Phe	Cys	Leu	Leu	Leu	Leu	Tyr
1				5					10					15
Leu	Ile	Gly	Ala	Val	Ile	Ala	Gly	Arg	Asp	Phe	Tyr	Lys	Ile	Leu
				20					25					30
Gly	Val	Pro	Arg	Ser	Ala	Ser	Ile	Lys	Asp	Ile	Lys	Lys	Ala	Tyr
				35					40					45
Arg	Lys	Leu	Ala	Leu	Gln	Leu	His	Pro	Asp	Arg	Asn	Pro	Asp	Asp
				50					55					60
Pro	Gln	Ala	Gln	Glu	Lys	Phe	Gln	Asp	Leu	Gly	Ala	Ala	Tyr	Glu
				65					70					75
Val	Leu	Ser	Asp	Ser	Glu	Lys	Arg	Lys	Gln	Tyr	Asp	Thr	Tyr	Gly
				80					85					90
Glu	Glu	Gly	Leu	Lys	Asp	Gly	His	Gln	Ser	Ser	His	Gly	Asp	Ile
				95					100					105
Phe	Ser	His	Phe	Phe	Gly	Asp	Phe	Gly	Phe	Met	Phe	Gly	Gly	Thr
				110					115					120
Pro	Arg	Gln	Gln	Asp	Arg	Asn	Ile	Pro	Arg	Gly	Ser	Asp	Ile	Ile
				125					130					135
Val	Asp	Leu	Glu	Val	Thr	Leu	Glu	Glu	Val	Tyr	Ala	Gly	Asn	Phe
				140					145					150
Val	Glu	Val	Val	Arg	Asn	Lys	Pro	Val	Ala	Arg	Gln	Ala	Pro	Gly
				155					160					165
Lys	Arg	Lys	Cys	Asn	Cys	Arg	Gln	Glu	Met	Arg	Thr	Thr	Gln	Leu
				170					175					180
Gly	Pro	Gly	Arg	Phe	Gln	Met	Thr	Gln	Glu	Val	Val	Cys	Asp	Glu
				185					190					195
Cys	Pro	Asn	Val	Lys	Leu	Val	Asn	Glu	Glu	Arg	Thr	Leu	Glu	Val
				200					205					210
Glu	Ile	Glu	Pro	Gly	Val	Arg	Asp	Gly	Met	Glu	Tyr	Pro	Phe	Ile
				215					220					225
Gly	Glu	Gly	Glu	Pro	His	Val	Asp	Gly	Glu	Pro	Gly	Asp	Leu	Arg
				230					235					240
Phe	Arg	Ile	Lys	Val	Val	Lys	His	Pro	Ile	Phe	Glu	Arg	Arg	Gly
				245					250					255
Asp	Asp	Leu	Tyr	Thr	Asn	Val	Thr	Ile	Ser	Leu	Val	Glu	Ser	Leu
				260					265					270
Val	Gly	Phe	Glu	Met	Asp	Ile	Thr	His	Leu	Asp	Gly	His	Lys	Val
				275					280					285
His	Ile	Ser	Arg	Asp	Lys	Ile	Thr	Arg	Pro	Gly	Ala	Lys	Leu	Trp
				290					295					300

Lys Lys Gly Glu Gly Leu Pro Asn Phe Asp Asn Asn Asn Ile Lys
 305 310 315
 Gly Ser Leu Ile Ile Thr Phe Asp Val Asp Phe Pro Lys Glu Gln
 320 325 330
 Leu Thr Glu Glu Ala Arg Glu Gly Ile Lys Gln Leu Leu Lys Gln
 335 340 345
 Gly Ser Val Gln Lys Val Tyr Asn Gly Leu Gln Gly Tyr
 350 355

<210> 149
 <211> 509
 <212> DNA
 <213> Homo sapiens
 <220>
 <221> unsure
 <222> 34, 52, 134, 142, 155, 158, 196, 217, 228, 272, 347, 410, 445,
 482
 <223> unknown base

<400> 149
 tgggaccagg gaaccccgagg ccccccggtg gagngcctaa caggccggtg 50
 gntgcgaccg aagcggcgagg cggaggagggt tttagaggatt ttggaacag 100
 gacccggaca gaggaaccat ggttccgcag aacntgagca cnttttgcct 150
 gttgntgnta tacttcatcg gggcggtgat tgccggacga gatttntata 200
 agattttggg gtgcctngaa gtgccttnta taaaggatat taaaaaggcc 250
 tataggaaac tagccctgca gntttatccc gacoggaacc ctgatgatcc 300
 acaagcccag gagaaattcc aggatttggg tgctgcttat gaggttntgt 350
 cagatagtga gaaacggaaa cagtacgata attatggtga agaaggatta 400
 aaagatggtn atcagagctc ccatggagac atttttttcac acttnttttg 450
 ggatttttgg ttcatgtttg gaggaacccc tngtcagcaa gacagaaata 500
 ttccaagag 509

<210> 150
 <211> 1532
 <212> DNA
 <213> Homo sapiens

<400> 150
 ggcacgaggc ggcgggggcag tcgcgggatg cgcccgggag ccacagcctg 50
 aggcctcag gtctctgcag gtgtcgtgga ggaacctagc acctgccatc 100
 ctcttcccca atttgccact tccagcagct ttagcccatg aggaggatgt 150
 gaccgggact gagtcaggag ccctctggaa gcatggagac tgtggtgatt 200
 gttgccatag gtgtgctggc caccatcttt ctggcttcgt ttgcagcctt 250
 ggtgctggtt tgcaggcagc gctactgccg gccgcgagac ctgctgcagc 300

gctatgattc taagcccatt gtggacctca ttggtgccat ggagacccag 350
tctgagccct ctgagttaga actggacgat gtcgttatca ccaacccccca 400
cattgaggcc attctggaga atgaagactg gatcgaagat gcctcgggtc 450
tcatgtccca ctgcattgcc atcttgaaga tttgtcacac tctgacagag 500
aagcttggtg ccatgacaat gggctctggg gccaatga agacttcagc 550
cagtgtcagc gacatcattg tgggtggccaa gcggatcagc cccaggggtg 600
atgatgttgt gaagtcgatg taccctccgt tggaccccaa actcctggac 650
gcacggacga ctgccctgct cctgtctgtc agtcacctgg tgctggtgac 700
aaggaatgcc tgccatctga cgggaggcct ggactggatt gaccagtctc 750
tgtcggctgc tgaggagcat ttggaagtcc ttcgagaagc agccctagct 800
tctgagccag ataaaggcct cccaggccct gaaggcttcc tgcaggagca 850
gtctgcaatt tagtgcctac aggcagcag ctagccatga aggccctgc 900
cgccatccct ggatggctca gcttagcctt ctactttttc ctatagagtt 950
agttgttctc cacggctgga gagttcagct gtgtgtgcat agtaaagcag 1000
gagatccccg tcagtttatg cctcttttgc agttgcaaac tgtggctggt 1050
gagtggcagt ctaatactac agttagggga gatgccattc actctctgca 1100
agaggagtat tgaaaactgg tggactgtca gctttattta gctcacctag 1150
tgttttcaag aaaattgagc caccgtctaa gaaatcaaga ggtttcacat 1200
taaaattaga atttctggcc tctctcgatc ggtcagaatg tgtggcaatt 1250
ctgatctgca ttttcagaag aggacaatca attgaaacta agtaggggtt 1300
tcttcttttg gcaagacttg tactctctca cctggcctgt ttcatttatt 1350
tgtattatct gcctgggtccc tgaggcgtct gggctctctcc tctcccttgc 1400
aggtttgggt ttgaagctga ggaactacaa agttgatgat ttctttttta 1450
tctttatgcc tgcaatttta cctagctacc actaggtgga tagtaaat 1500
atacttatgt ttccctcaaa aaaaaaaaaa aa 1532

<210> 151
<211> 226
<212> PRT
<213> Homo sapiens

<400> 151
Met Glu Thr Val Val Ile Val Ala Ile Gly Val Leu Ala Thr Ile
1 5 10 15
Phe Leu Ala Ser Phe Ala Ala Leu Val Leu Val Cys Arg Gln Arg
20 25 30
Tyr Cys Arg Pro Arg Asp Leu Leu Gln Arg Tyr Asp Ser Lys Pro

	35	40	45
Ile Val Asp Leu	Ile Gly Ala Met Glu Thr Gln Ser Glu Pro Ser		
	50	55	60
Glu Leu Glu Leu Asp Asp Val Val Ile Thr Asn Pro His Ile Glu		70	75
	65		
Ala Ile Leu Glu Asn Glu Asp Trp Ile Glu Asp Ala Ser Gly Leu		85	90
	80		
Met Ser His Cys Ile Ala Ile Leu Lys Ile Cys His Thr Leu Thr		100	105
	95		
Glu Lys Leu Val Ala Met Thr Met Gly Ser Gly Ala Lys Met Lys		115	120
	110		
Thr Ser Ala Ser Val Ser Asp Ile Ile Val Val Ala Lys Arg Ile		130	135
	125		
Ser Pro Arg Val Asp Asp Val Val Lys Ser Met Tyr Pro Pro Leu		145	150
	140		
Asp Pro Lys Leu Leu Asp Ala Arg Thr Thr Ala Leu Leu Leu Ser		160	165
	155		
Val Ser His Leu Val Leu Val Thr Arg Asn Ala Cys His Leu Thr		175	180
	170		
Gly Gly Leu Asp Trp Ile Asp Gln Ser Leu Ser Ala Ala Glu Glu		190	195
	185		
His Leu Glu Val Leu Arg Glu Ala Ala Leu Ala Ser Glu Pro Asp		205	210
	200		
Lys Gly Leu Pro Gly Pro Glu Gly Phe Leu Gln Glu Gln Ser Ala		220	225
	215		
Ile			

<210> 152
 <211> 1027
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 1017, 1020
 <223> unknown base

<400> 152
 gcttcatttc tcccgactca gcttcccacc ctgggctttc cgaggtgctt 50
 tcgccgctgt cccaccact gcagccatga tctccttaac ggacacgcag 100
 aaaattggaa tgggattaac aggatttgga gtgtttttcc tggtctttgg 150
 aatgattctc ttttttgaca aagcactact ggctattgga aatgttttat 200
 ttgtagccgg cttggctttt gtaattgggt tagaaagaac attcagattc 250
 ttcttcctaaa aacataaaat gaaagctaca ggtttttttc tgggtggtgt 300

Gln Lys His Lys Met Lys Ala Thr Gly Phe Phe Leu Gly Gly Val
65 70 75
Phe Val Val Leu Ile Gly Trp Pro Leu Ile Gly Met Ile Phe Glu
80 85 90
Ile Tyr Gly Phe Phe Leu Leu Phe Arg Gly Phe Phe Pro Val Val
95 100 105
Val Gly Phe Ile Arg Arg Val Pro Val Leu Gly Ser Leu Leu Asn
110 115 120
Leu Pro Gly Ile Arg Ser Phe Val Asp Lys Val Gly Glu Ser Asn
125 130 135
Asn Met Val

<210> 154
<211> 405
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 66
<223> unknown base

<400> 154
gaagacgtgg cggctctcgc ctgggctggt tcccggttc atttctcccg 50
actcagcttc ccacntggg ctttcogagg tgctttcgcc gctgtcccca 100
ccactgcagc catgatctcc ttaacggaca cgcagaaaat tggaatggga 150
ttaaccggat ttggagtgtt tttcctgttc ttggaatga ttctcttttt 200
tgacaaagca ctactggcta ttggaaatgt tttatttgta gccggcttgg 250
cttttgtaat tggtttagaa agaacattca gattcttctt ccaaaaacat 300
aaaatgaaag ctacaggttt ttttctgggt ggtgtatttg tagtccttat 350
tggttggcct ttgataggca tgatcttoga aatttatgga tttttctct 400
tgttc 405

<210> 155
<211> 1781
<212> DNA
<213> Homo sapiens

<400> 155
ggcacgaggc tgaaccagc cggctccatc tcagcttctg gtttctaagt 50
ccatgtgcc aaggctgcc ggaaggagac gccttctga gtctggatc 100
tttcttctt ctggaaatct ttgactgtgg gtagttattt atttctgaat 150
aagagcgtcc acgcatcatg gacctcggg gactgctgaa gtctcagttc 200
ctgtgccacc tggcttctg ctacgtcttt attgootcag ggctaatacat 250

caacaccatt cagctcttca ctctcctcct ctggcccatt aacaagcagc 300
 tcttccggaa gatcaactgc agactgtcct attgcatctc aagccagctg 350
 gtgatgctgc tggagtggtg gtcgggcacg gaatgcacca tcttcacgga 400
 cccgcgcgcc tacctcaagt atgggaagga aaatgocata gtgggttctca 450
 accacaagtt tgaaattgac tttctgtgtg gctggagcct gtccgaacgc 500
 tttgggctgt tagggggctc caaggtcctg gccaaagaaag agctggccta 550
 tgtcccaatt atcggctgga tgtgtgactt caccgagatg gtcttctgtt 600
 cgcgcaagtg ggagcaggat cgcaagacgg ttgccaccag tttgcagcac 650
 ctccgggact accccgagaa gtattttttc ctgattcact gtgagggcac 700
 acggttcacg gagaagaagc atgagatcag catgcagggtg gcccgggcca 750
 aggggctgcc tcgcctcaag catcacctgt tgccacgaac caagggcttc 800
 gccatcacgc tgaggagctt gagaaatgta gtttcagctg tatatgactg 850
 tacactcaat ttcagaaata atgaaaatcc aacactgctg ggagtcctaa 900
 acggaagaa ataccatgca gatttgtatg ttaggaggat cccactggaa 950
 gacatccctg aagacgatga cgagtgtctg gcctggctgc acaagctcta 1000
 ccaggagaag gatgcctttc aggaggagta ctacaggacg ggcaccttcc 1050
 cagagacgcc catggtgccc ccccggcggc cctggaccct cgtgaactgg 1100
 ctgttttggg cctcgtggtt gctctaccct ttcttccagt tcctggtcag 1150
 catgatcagg agcgggtctt ccctgacgct ggccagcttc atcctcgtct 1200
 tctttgtggc ctccgtggga gttcgatgga tgattggtgt gacggaaatt 1250
 gacaagggct ctgcctacgc caactctgac agcaagcaga aactgaatga 1300
 ctgactcagg gaggtgtcac catccgaagg gaaccttggg gaactggtgg 1350
 cctctgcata tcctccttag tgggacacgg tgacaaaggc tgggtgagcc 1400
 cctgctgggc acggcggaag tcacgacctc tocagccagg gagtctggtc 1450
 tcaaggccgg atggggagga agatgttttg taatcttttt ttcccatgt 1500
 gctttagtgg gctttggttt tctttttgtg cgagtgtgtg tgagaatggc 1550
 tgtgtggtga gtgtgaactt tgttctgtga tcatagaaag ggtatttttag 1600
 gctgcagggg agggcagggc tggggaccga aggggacaag ttcccctttc 1650
 atcctttggt gctgagtttt ctgtaacctt tggttgccag agataaagtg 1700
 aaaagtgctt taggtgagat gactaaatta tgctccaag aaaaaaaaaa 1750
 taaagtgctt ttctgggtca aaaaaaaaaa a 1781

<210> 156

	290		295		300
Pro Pro Arg Arg	Pro Trp Thr Leu Val	Asn Trp Leu Phe Trp	Ala		
	305	310	315		
Ser Leu Val Leu	Tyr Pro Phe Phe Gln	Phe Leu Val Ser Met	Ile		
	320	325	330		
Arg Ser Gly Ser	Ser Leu Thr Leu Ala	Ser Phe Ile Leu Val	Phe		
	335	340	345		
Phe Val Ala Ser	Val Gly Val Arg Trp	Met Ile Gly Val Thr	Glu		
	350	355	360		
Ile Asp Lys Gly	Ser Ala Tyr Gly Asn	Ser Asp Ser Lys Gln	Lys		
	365	370	375		
Leu Asn Asp					

<210> 157
 <211> 1849
 <212> DNA
 <213> Homo sapiens

<400> 157
 ctgaggcggc ggtagcatgg agggggagag tacgtcggcg gtgctctcgg 50
 gctttgtgct cggcgcactc gctttccagc acctcaacac ggactcggac 100
 acggaagggt ttcttcttgg ggaagtaaaa ggtgaagcca agaacagcat 150
 tactgattcc caaatggatg atgttgaagt tgtttataca attgacattc 200
 agaaatatat tccatgctat cagcttttta gcttttataa ttcttcaggc 250
 gaagtaaatg agcaagcact gaagaaaata ttatcaaata tcaaaaagaa 300
 tgtggtaggt tggtaaaaat tccgtcgtca ttcagatcag atcatgacgt 350
 ttagagagag gctgcttcac aaaaacttgc aggagcattt ttcaaaccac 400
 gaccttggtt ttctgctatt aacaccaagt ataataacag aaagctgctc 450
 tactcatcga ctggaacatt ccttatataa acctcaaaaa ggactttttc 500
 acaggttacc tttagtgggt gccaatctgg gcatgtctga acaactgggt 550
 tataaaactg tatcagggtc ctgtatgtcc actgggttta gccgagcagt 600
 acaaacacac agctctaaat tttttgaaga agatggatcc ttaaaggagg 650
 tacataagat aaatgaaatg tatgcttcat tacaagagga attaaagagt 700
 atatgcaaaa aagtgaaga cagtgaacaa gcagtagata aactagtaaa 750
 ggatgtaaac agattaaaac gagaaattga gaaaaggaga ggagcacaga 800
 ttcaggcagc aagagagaag aacatccaaa aagaccctca ggagaacatt 850
 tttctttgtc aggcattacg gacctttttt ccaaattctg aatttcttca 900
 ttcatgtgtt atgtctttta aaaatagaca tgtttctaaa agtagctgta 950

actacaacca ccatctcgat gtagtagaca atctgacctt aatggtagaa 1000
cacactgaca ttctgaagc tagtccagct agtacaccac aaatcattaa 1050
gcataaagcc ttagacttag atgacagatg gcaattcaag agatctcggt 1100
tgttagatac acaagacaaa cgatctaaag caaatactgg tagtagtaac 1150
caagataaag catccaaaat gagcagccca gaaacagatg aagaaattga 1200
aaagatgaag ggttttggtg aatattcacg gtctcctaca ttttgatcct 1250
tttaacctta caaggagatt tttttatttg gctgatgggt aaagccaaac 1300
atttctattg tttttactat gttgagctac ttgcagtaag ttcatttggt 1350
tttactatgt tcacctgttt gcagtaatac acagataact cttagtgcac 1400
ttacttcaca aagtactttt tcaaacaatca gatgctttta tttccaaacc 1450
tttttttcac ctttactaa gttgttgagg ggaaggctta cacagacaca 1500
ttcttttagaa ttggaaaagt gagaccaggc acagtggctc acacctgtaa 1550
tcccagcact tagggaagac aagtcaggag gattgattga agctaggagt 1600
tagagaccag cctgggcaac gtattgagac catgtctatt aaaaaataaa 1650
atggaaaagc aagaatagcc ttattttcaa aatatggaaa gaaatttata 1700
tgaaaattta tctgagtcac taaaattctc cttaagtgat acttttttag 1750
aagtacatta tggctagagt tgccagataa aatgctggat atcatgcaat 1800
aaatttgcaa aacatcatct aaaattttaa aaaaaaaaaa aaaaaaaaaa 1849

<210> 158
<211> 409
<212> PRT
<213> Homo sapiens

<400> 158
Met Glu Gly Glu Ser Thr Ser Ala Val Leu Ser Gly Phe Val Leu
1 5 10 15
Gly Ala Leu Ala Phe Gln His Leu Asn Thr Asp Ser Asp Thr Glu
20 25 30
Gly Phe Leu Leu Gly Glu Val Lys Gly Glu Ala Lys Asn Ser Ile
35 40 45
Thr Asp Ser Gln Met Asp Asp Val Glu Val Val Tyr Thr Ile Asp
50 55 60
Ile Gln Lys Tyr Ile Pro Cys Tyr Gln Leu Phe Ser Phe Tyr Asn
65 70 75
Ser Ser Gly Glu Val Asn Glu Gln Ala Leu Lys Lys Ile Leu Ser
80 85 90
Asn Val Lys Lys Asn Val Val Gly Trp Tyr Lys Phe Arg Arg His
95 100 105

Ser	Asp	Gln	Ile	Met	Thr	Phe	Arg	Glu	Arg	Leu	Leu	His	Lys	Asn	
				110					115					120	
Leu	Gln	Glu	His	Phe	Ser	Asn	Gln	Asp	Leu	Val	Phe	Leu	Leu	Leu	
				125					130					135	
Thr	Pro	Ser	Ile	Ile	Thr	Glu	Ser	Cys	Ser	Thr	His	Arg	Leu	Glu	
				140					145					150	
His	Ser	Leu	Tyr	Lys	Pro	Gln	Lys	Gly	Leu	Phe	His	Arg	Val	Pro	
				155					160					165	
Leu	Val	Val	Ala	Asn	Leu	Gly	Met	Ser	Glu	Gln	Leu	Gly	Tyr	Lys	
				170					175					180	
Thr	Val	Ser	Gly	Ser	Cys	Met	Ser	Thr	Gly	Phe	Ser	Arg	Ala	Val	
				185					190					195	
Gln	Thr	His	Ser	Ser	Lys	Phe	Phe	Glu	Glu	Asp	Gly	Ser	Leu	Lys	
				200					205					210	
Glu	Val	His	Lys	Ile	Asn	Glu	Met	Tyr	Ala	Ser	Leu	Gln	Glu	Glu	
				215					220					225	
Leu	Lys	Ser	Ile	Cys	Lys	Lys	Val	Glu	Asp	Ser	Glu	Gln	Ala	Val	
				230					235					240	
Asp	Lys	Leu	Val	Lys	Asp	Val	Asn	Arg	Leu	Lys	Arg	Glu	Ile	Glu	
				245					250					255	
Lys	Arg	Arg	Gly	Ala	Gln	Ile	Gln	Ala	Ala	Arg	Glu	Lys	Asn	Ile	
				260					265					270	
Gln	Lys	Asp	Pro	Gln	Glu	Asn	Ile	Phe	Leu	Cys	Gln	Ala	Leu	Arg	
				275					280					285	
Thr	Phe	Phe	Pro	Asn	Ser	Glu	Phe	Leu	His	Ser	Cys	Val	Met	Ser	
				290					295					300	
Leu	Lys	Asn	Arg	His	Val	Ser	Lys	Ser	Ser	Cys	Asn	Tyr	Asn	His	
				305					310					315	
His	Leu	Asp	Val	Val	Asp	Asn	Leu	Thr	Leu	Met	Val	Glu	His	Thr	
				320					325					330	
Asp	Ile	Pro	Glu	Ala	Ser	Pro	Ala	Ser	Thr	Pro	Gln	Ile	Ile	Lys	
				335					340					345	
His	Lys	Ala	Leu	Asp	Leu	Asp	Asp	Arg	Trp	Gln	Phe	Lys	Arg	Ser	
				350					355					360	
Arg	Leu	Leu	Asp	Thr	Gln	Asp	Lys	Arg	Ser	Lys	Ala	Asn	Thr	Gly	
				365					370					375	
Ser	Ser	Asn	Gln	Asp	Lys	Ala	Ser	Lys	Met	Ser	Ser	Pro	Glu	Thr	
				380					385					390	
Asp	Glu	Glu	Ile	Glu	Lys	Met	Lys	Gly	Phe	Gly	Glu	Tyr	Ser	Arg	
				395					400					405	
Ser	Pro	Thr	Phe												

<210> 159
<211> 2651
<212> DNA
<213> Homo sapiens

<400> 159
ggcacagccg cgcgggcgag ggcagagtca gccgagccga gtccagccgg 50
acgagcggac cagcgcaggg cagcccaagc agcgcgcagc gaacgcccgc 100
cgccgcccac accctctgcg gtccccgcgg cgcttgccac ccttccctcc 150
ttccccgcgt ccccgctcg ccggccagtc agcttgccgg gttcgctgcc 200
ccgcgaaacc ccgaggtcac cagcccgcgc ctctgcttcc ctgggcccgc 250
cgccgcctcc acgccctcct tctccctgg ccgggcgcct ggcaccgggg 300
accgttgccct gacgcgaggc ccagctctac ttttgcgcc gcgtctctc 350
cgctgctcg cctcttccac caactccaac tcttctccc tccagctcca 400
ctcgtagtc ccgactccg ccagccctcg gccgctgcc gtagcgccgc 450
ttcccgctcg gtcccaaagg tgggaacgcg tccgccccgg ccgcacccat 500
ggcacgggtc ggcttgcccg cgcttctctg caccctggca gtgctcagcg 550
ccgcgctgct ggctgccgag ctcaagtoga aaagttgctc ggaagtgcga 600
cgtctttacg tgtccaaagg cttcaacaag aacgatgcc ccctccacga 650
gatcaacggt gatcatttga agatctgtcc ccagggttct acctgctgct 700
ctcaagagat ggaggagaag tacagcctgc aaagtaaaga tgatttcaaa 750
agtgtggtca gcgaacagtg caatcatttg caagctgtct ttgcttcacg 800
ttacaagaag tttgatgaat tcttcaaaga actacttgaa aatgcagaga 850
aatccctgaa tgatatgttt gtgaagacat atggccattt atacatgcaa 900
aattctgagc tattttaaga tctcttogta gagttgaaac gttactacgt 950
ggtgggaaat gtgaacctgg aagaaatgct aaatgacttc tgggctcgcc 1000
tcctggagcg gatgttccgc ctggtgaaat ccagtagca ctttacagat 1050
gagtatctgg aatgtgtgag caagtatacg gagcagctga agcccttcgg 1100
agatgtccct cgcaaattga agctccaggt tactcgtgct tttgtagcag 1150
cccgtacttt cgtcaaggc ttagcgggtg cgggagatgt cgtgagcaag 1200
gtctccgtgg taaaccccac agcccagtgt acccatgccc tgttgaagat 1250
gatctactgc tcccactgcc ggggtctcgt gactgtgaag ccatgttaca 1300
actactgctc aaacatcatg agaggctgtt tggccaacca aggggatctc 1350
gattttgaat ggaacaattt catagatgct atgctgatgg tggcagagag 1400
gctagagggt cctttcaaca ttgaatcggg catggatccc atcgatgtga 1450

agatttctga tgctattatg aacatgcagg ataatagtgt tcaagtgtct 1500
 cagaagggtt tccagggatg tggaccccc aagcccctcc cagctggacg 1550
 aatttctcgt tccatctctg aaagtgcctt cagtgtctgc ttcagaccac 1600
 atcacccccga ggaacgcccc accacagcag ctggcactag tttggaccga 1650
 ctggttactg atgtcaagga gaaactgaaa caggccaaga aattctggtc 1700
 ctcccttccg agcaacgttt gcaacgatga gaggatggct gcaggaaacg 1750
 gcaatgagga tgactgttgg aatgggaaag gcaaaagcag gtacctgttt 1800
 gcagtgcacg gaaatggatt agccaaccag ggcaacaacc cagagggtcca 1850
 ggttgacacc agcaaaccag acatactgat ccttcgtcaa atcatggctc 1900
 ttcgagtgat gaccagcaag atgaagaatg catacaatgg gaacgacgtg 1950
 gacttctttg atatcagtga tgaaagtagt ggagaaggaa gtggaagtgg 2000
 ctgtgagtat cagcagtgcc cttcagagtt tgactacaat gccactgacc 2050
 atgctgggaa gagtgccaat gagaaagccg acagtgtctg tgtccgtcct 2100
 ggggcacagg cctacctcct cactgtcttc tgcactttgt tcttggttat 2150
 gcagagagag tggagataat tctcaaactc tgagaaaaag tgttcatcaa 2200
 aaagttaaaa ggcaccagtt atcacttttc taccatccta gtgactttgc 2250
 tttttaaatg aatggacaac aatgtacagt ttttactatg tggccactgg 2300
 ttttaagaagt gctgactttg ttttctcatt cagttttggg aggaaaaggg 2350
 actgtgcatt gagttggttc ctgctcccc aaaccatggt aaacgtggct 2400
 aacagtgtag gtacagaact atagttagtt gtgcatttgt gattttatca 2450
 ctctattatt tgtttgtatg tttttttctc atttcgtttg tgggtttttt 2500
 tttccaactg tgatctcgcc ttgtttctta caagcaaacc agggtcctct 2550
 cttggcacgt aacatgtacg tatttctgaa atattaaata gctgtacaga 2600
 agcaggtttt atttatcatg ttatcttatt aaaagaaaaa gcccaaaaag 2650

c 2651

<210> 160

<211> 556

<212> PRT

<213> Homo sapiens

<400> 160

Met	Ala	Arg	Phe	Gly	Leu	Pro	Ala	Leu	Leu	Cys	Thr	Leu	Ala	Val
1				5				10					15	

Leu	Ser	Ala	Ala	Leu	Leu	Ala	Ala	Glu	Leu	Lys	Ser	Lys	Ser	Cys
				20				25					30	

Ser Glu Val Arg Arg Leu Tyr Val Ser Lys Gly Phe Asn Lys Asn

	35	40	45
Asp Ala Pro Leu His	Glu Ile Asn Gly Asp	His Leu Lys Ile Cys	
	50	55	60
Pro Gln Gly Ser Thr	Cys Cys Ser Gln Glu	Met Glu Glu Lys Tyr	
	65	70	75
Ser Leu Gln Ser Lys	Asp Asp Phe Lys Ser	Val Val Ser Glu Gln	
	80	85	90
Cys Asn His Leu Gln	Ala Val Phe Ala Ser	Arg Tyr Lys Lys Phe	
	95	100	105
Asp Glu Phe Phe Lys	Glu Leu Leu Glu Asn	Ala Glu Lys Ser Leu	
	110	115	120
Asn Asp Met Phe Val	Lys Thr Tyr Gly His	Leu Tyr Met Gln Asn	
	125	130	135
Ser Glu Leu Phe Lys	Asp Leu Phe Val Glu	Leu Lys Arg Tyr Tyr	
	140	145	150
Val Val Gly Asn Val	Asn Leu Glu Glu Met	Leu Asn Asp Phe Trp	
	155	160	165
Ala Arg Leu Leu Glu	Arg Met Phe Arg Leu	Val Asn Ser Gln Tyr	
	170	175	180
His Phe Thr Asp Glu	Tyr Leu Glu Cys Val	Ser Lys Tyr Thr Glu	
	185	190	195
Gln Leu Lys Pro Phe	Gly Asp Val Pro Arg	Lys Leu Lys Leu Gln	
	200	205	210
Val Thr Arg Ala Phe	Val Ala Ala Arg Thr	Phe Ala Gln Gly Leu	
	215	220	225
Ala Val Ala Gly Asp	Val Val Ser Lys Val	Ser Val Val Asn Pro	
	230	235	240
Thr Ala Gln Cys Thr	His Ala Leu Leu Lys	Met Ile Tyr Cys Ser	
	245	250	255
His Cys Arg Gly Leu	Val Thr Val Lys Pro	Cys Tyr Asn Tyr Cys	
	260	265	270
Ser Asn Ile Met Arg	Gly Cys Leu Ala Asn	Gln Gly Asp Leu Asp	
	275	280	285
Phe Glu Trp Asn Asn	Phe Ile Asp Ala Met	Leu Met Val Ala Glu	
	290	295	300
Arg Leu Glu Gly Pro	Phe Asn Ile Glu Ser	Val Met Asp Pro Ile	
	305	310	315
Asp Val Lys Ile Ser	Asp Ala Ile Met Asn	Met Gln Asp Asn Ser	
	320	325	330
Val Gln Val Ser Gln	Lys Val Phe Gln Gly	Cys Gly Pro Pro Lys	
	335	340	345
Pro Leu Pro Ala Gly	Arg Ile Ser Arg Ser	Ile Ser Glu Ser Ala	

<400> 162
tcacatcgat gggatccatg accg 24

<210> 163
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 163
ggtctcgtga ctgtgaagcc atgttacaac tactgctcaa acatcatgag 50

<210> 164
<211> 870
<212> DNA
<213> Homo sapiens

<400> 164
ctcgccctca aatgggaacg ctggcctggg actaaagcat agaccaccag 50
gctgagtatc ctgacctgag tcatccccag ggatcaggag cctccagcag 100
ggaaccttcc attatatctt tcaagcaact tacagctgca cgcacagttg 150
cgatgaaagt tctaattctt tccctcctcc tgttgctgcc actaatgctg 200
atgtccatgg tctctagcag cctgaatcca ggggtcgcca gagggccacag 250
ggaccgaggc caggcttcta ggagatggct ccaggaaggc ggccaagaat 300
gtgagtgcaa agattggttc ctgagagccc cgagaagaaa attcatgaca 350
gtgtctgggc tgccaaagaa gcagtgcgcc tgtgatcatt tcaagggcaa 400
tgtgaagaaa acaagacacc aaaggcacca cagaaagcca aacaagcatt 450
ccagagcctg ccagcaattt ctcaaacaat gtcagctaag aagctttgct 500
ctgcctttgt aggagctctg agcgcccact cttccaatta aacatttctca 550
gccaagaaga cagtgagcac acctaccaga cactcttctt ctccacctc 600
actctccac tgtaccaccc cctaaatcat tccagtgtc tcaaaaagca 650
tgtttttcaa gatcattttg tttgttgctc tctctagtgt cttcttctct 700
cgtcagtctt agcctgtgcc ctccccttac ccaggcttag gcttaattac 750
ctgaaagatt ccaggaaact gtagcttctt agctagtgtc atttaacctt 800
aatgcaatc aggaaagtag caaacagaag tcaataaata tttttaaatg 850
tcaaaaaaaaa aaaaaaaaaa 870

<210> 165
<211> 119
<212> PRT
<213> Homo sapiens

<400> 165
Met Lys Val Leu Ile Ser Ser Leu Leu Leu Leu Leu Pro Leu Met

1	5	10	15
Leu Met Ser Met Val Ser Ser Ser Leu Asn Pro Gly Val Ala Arg	20	25	30
Gly His Arg Asp Arg Gly Gln Ala Ser Arg Arg Trp Leu Gln Glu	35	40	45
Gly Gly Gln Glu Cys Glu Cys Lys Asp Trp Phe Leu Arg Ala Pro	50	55	60
Arg Arg Lys Phe Met Thr Val Ser Gly Leu Pro Lys Lys Gln Cys	65	70	75
Pro Cys Asp His Phe Lys Gly Asn Val Lys Lys Thr Arg His Gln	80	85	90
Arg His His Arg Lys Pro Asn Lys His Ser Arg Ala Cys Gln Gln	95	100	105
Phe Leu Lys Gln Cys Gln Leu Arg Ser Phe Ala Leu Pro Leu	110	115	

<210> 166
 <211> 551
 <212> DNA
 <213> Homo sapiens

<400> 166
 aatggctgtc ttagtacttc gcctgacagt tgtcctggga ctgcttgtct 50
 tattcctgac ctgctatgca gacgacaaac cagacaagcc agacgacaag 100
 ccagacgact cgggcaaaga cccaaagcca gacttcccca aattcctaag 150
 cctcctgggc acagagatca ttgagaatgc agtcgagttc atcctccgct 200
 ccatgtccag gagcacagga tttatggaat ttgatgataa tgaaggaaaa 250
 cattcatcaa agtgacatcc tcaggacaca cccatgtggc tcctggacaa 300
 tccaagagca gccaaatcct gcttttccag tttgggtcca caagtcctcc 350
 aggacagagc cctcaaagca actcccaacg agttctcagg attcaggctc 400
 tggcttcaac caaacagaac tcattttgaa caccctgact gcatttttgc 450
 ttttagaaaag ttagaataaa tatggcgctt tgggatcaca tagttgatgg 500
 agaggaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 550
 a 551

<210> 167
 <211> 87
 <212> PRT
 <213> Homo sapiens

<400> 167
 Met Ala Val Leu Val Leu Arg Leu Thr Val Val Leu Gly Leu Leu
 1 5 10 15
 Val Leu Phe Leu Thr Cys Tyr Ala Asp Asp Lys Pro Asp Lys Pro

	20		25		30
Asp Asp Lys Pro Asp Asp Ser Gly Lys Asp Pro Lys Pro Asp Phe	35		40		45
Pro Lys Phe Leu Ser Leu Leu Gly Thr Glu Ile Ile Glu Asn Ala	50		55		60
Val Glu Phe Ile Leu Arg Ser Met Ser Arg Ser Thr Gly Phe Met	65		70		75
Glu Phe Asp Asp Asn Glu Gly Lys His Ser Ser Lys	80		85		

<210> 168
 <211> 1371
 <212> DNA
 <213> Homo sapiens

<400> 168
 ggacgccagc gcctgcagag gctgagcagg gaaaaagcca gtgccccagc 50
 ggaagcacag ctgagagctg gtctgccatg gacatcctgg tcccactcct 100
 gcagctgctg gtgctgcttc ttaccctgcc cctgcacctc atggtctctgc 150
 tgggctgctg gcagcccctg tgcaaaagct acttccccta cctgatggcc 200
 gtgctgactc ccaagagcaa ccgcaagatg gagagcaaga aacgggagct 250
 cttcagccag ataaaggggc ttacaggagc ctccgggaaa gtggccctac 300
 tggagctggg ctgcggaacc ggagccaact ttcagttcta cccaccgggc 350
 tgcaggggtca cctgcctaga cccaaatccc cactttgaga agttcctgac 400
 aaagagcatg gctgagaaca ggcacctcca atatgagcgg tttgtggtgg 450
 ctctggaga ggacatgaga cagctggctg atggtccat ggatgtggtg 500
 gtctgcactc tgggtgctgtg ctctgtgcag agcccaagga aggtcctgca 550
 ggaggtccgg agagtactga gaccgggagg tgtgtctctt ttctgggagc 600
 atgtggcaga accatatgga agctgggcct tcatgtggca gcaagttttc 650
 gagcccacct ggaaacacat tggggatggc tgctgcctca ccagagagac 700
 ctggaaggat cttgagaacg ccagttctc cgaaatccaa atggaacgac 750
 agccccctcc cttgaagtgg ctacctgttg ggccccacat catgggaaag 800
 gctgtcaaac aatctttccc aagctccaag gcactcattt gctccttccc 850
 cagcctccaa ttagaacaag ccaccacca gcctatctat cttccactga 900
 gagggaccta gcagaatgag agaagacatt catgtaccac ctactagtcc 950
 ctctctcccc aacctctgcc agggcaatct ctaacttcaa tccgccttc 1000
 gacagtgaaa aagctctact tctacgtga ccaggagg aaacactagg 1050
 accctgttgt atctcaact gcaagtttct ggactagtct cccaacgttt 1100

gcctcccaat gttgtccctt tccttcgttc ccatggtaaa gtcctctctg 1150
ctttcctcct gaggctacac ccatgctgtc ctaggaactg gtcacaaaag 1200
tcatgggtgcc tgcacccctg ccaagccccc ctgacctct ctccccacta 1250
ccaccttctt cctgagctgg gggcaccagg gagaatcaga gatgctgggg 1300
atgccagagc aagactcaaa gaggcagagg ttttgttctc aaatattttt 1350
taataaatag acgaaaccac g 1371

<210> 169
<211> 277
<212> PRT
<213> Homo sapiens

<400> 169
Met Asp Ile Leu Val Pro Leu Leu Gln Leu Leu Val Leu Leu Leu
1 5 10 15
Thr Leu Pro Leu His Leu Met Ala Leu Leu Gly Cys Trp Gln Pro
20 25 30
Leu Cys Lys Ser Tyr Phe Pro Tyr Leu Met Ala Val Leu Thr Pro
35 40 45
Lys Ser Asn Arg Lys Met Glu Ser Lys Lys Arg Glu Leu Phe Ser
50 55 60
Gln Ile Lys Gly Leu Thr Gly Ala Ser Gly Lys Val Ala Leu Leu
65 70 75
Glu Leu Gly Cys Gly Thr Gly Ala Asn Phe Gln Phe Tyr Pro Pro
80 85 90
Gly Cys Arg Val Thr Cys Leu Asp Pro Asn Pro His Phe Glu Lys
95 100 105
Phe Leu Thr Lys Ser Met Ala Glu Asn Arg His Leu Gln Tyr Glu
110 115 120
Arg Phe Val Val Ala Pro Gly Glu Asp Met Arg Gln Leu Ala Asp
125 130 135
Gly Ser Met Asp Val Val Val Cys Thr Leu Val Leu Cys Ser Val
140 145 150
Gln Ser Pro Arg Lys Val Leu Gln Glu Val Arg Arg Val Leu Arg
155 160 165
Pro Gly Gly Val Leu Phe Phe Trp Glu His Val Ala Glu Pro Tyr
170 175 180
Gly Ser Trp Ala Phe Met Trp Gln Gln Val Phe Glu Pro Thr Trp
185 190 195
Lys His Ile Gly Asp Gly Cys Cys Leu Thr Arg Glu Thr Trp Lys
200 205 210
Asp Leu Glu Asn Ala Gln Phe Ser Glu Ile Gln Met Glu Arg Gln
215 220 225

Pro Pro Pro Leu Lys Trp Leu Pro Val Gly Pro His Ile Met Gly
 230 235 240

Lys Ala Val Lys Gln Ser Phe Pro Ser Ser Lys Ala Leu Ile Cys
 245 250 255

Ser Phe Pro Ser Leu Gln Leu Glu Gln Ala Thr His Gln Pro Ile
 260 265 270

Tyr Leu Pro Leu Arg Gly Thr
 275

<210> 170
 <211> 1621
 <212> DNA
 <213> Homo sapiens

<400> 170
 gtgggattta tttgagtgc agatcgtttt ctcagtgggtg gtggaagttg 50
 cctcatcgca ggcagatgtt ggggctttgt ccgaacagct cccctctgcc 100
 agcttctgta gataagggtt aaaaactaat atttatatga cagaagaaaa 150
 agatgtcatt ccgtaaagta aacatcatca tcttggtcct ggctgttgct 200
 ctcttcttac tggttttgca ccataacttc ctcagcttga gcagtttggt 250
 aaggaatgag gttacagatt caggaattgt agggcctcaa cctatagact 300
 ttgtcccaaa tgctctccga catgcagtag atgggagaca agaggagatt 350
 cctgtggtca tcgctgcac tgaagacagg cttggggggg ccattgcagc 400
 tataaacagc attcagcaca aactcgctc caatgtgatt ttctacattg 450
 ttactctcaa caatacagca gaccatctcc ggtcctggct caacagtgat 500
 tccctgaaaa gcatcagata caaaattgtc aattttgacc ctaaactttt 550
 ggaaggaaaa gtaaaggagg atcctgacca gggggaatcc atgaaacctt 600
 taacctttgc aaggttctac ttgccaatc tggttcccag cgcaaagaag 650
 gccatataca tggatgatga tgtaattgtg caaggtgata ttcttgccct 700
 ttacaatata gcaactgaag caggacatgc agctgcattt tcagaagatt 750
 gtgattcagc ctctactaaa gttgtcatcc gtggagcagg aaaccagtac 800
 aattacattg gctatcttga ctataaaaag gaaagaattc gtaagctttc 850
 catgaaagcc agcacttgct catttaatcc tggagttttt gttgcaaacc 900
 tgacggaatg gaaacgacag aatataacta accaactgga aaaatggatg 950
 aaactcaatg tagaagaggg actgtatagc agaaccctgg ctggtagcat 1000
 cacaacacct cctctgttta tcgtatttta tcaacagcac tctaccatcg 1050
 atcctatgtg gaatgtccgc caccttggtt ccagtgtctg aaaacgatat 1100
 tcacctcagt ttgtaaaggc tgccaagtta ctccattgga atggacattt 1150

gaagccatgg ggaaggactg cttcatatac tgatgtttgg gaaaaatggg 1200
atattccaga cccaacaggc aaattcaacc taatccgaag atataccgag 1250
atctcaaaca taaagtgaaa cagaatttga actgtaagca agcatttctc 1300
aggaagtcct ggaagatagc atgcatggga agtaacagtt gctaggcttc 1350
aatgcctatc ggtagcaagc catggaaaaa gatgtgtcag ctaggtaaag 1400
atgacaaact gccctgtctg gcagtcagct tcccagacag actatagact 1450
ataaatatgt ctccatctgc cttaccaagt gttttcttac tacaatgctg 1500
aatgactgga aagaagaact gatatggcta gttcagctag ctggtacaga 1550
taattcaaaa ctgctgttgg ttttaatttt gtaacctgtg gcctgatctg 1600
taaataaaaac ttacattttt c 1621

<210> 171
<211> 371
<212> PRT
<213> Homo sapiens

<400> 171
Met Ser Phe Arg Lys Val Asn Ile Ile Ile Leu Val Leu Ala Val
1 5 10 15
Ala Leu Phe Leu Leu Val Leu His His Asn Phe Leu Ser Leu Ser
20 25 30
Ser Leu Leu Arg Asn Glu Val Thr Asp Ser Gly Ile Val Gly Pro
35 40 45
Gln Pro Ile Asp Phe Val Pro Asn Ala Leu Arg His Ala Val Asp
50 55 60
Gly Arg Gln Glu Glu Ile Pro Val Val Ile Ala Ala Ser Glu Asp
65 70 75
Arg Leu Gly Gly Ala Ile Ala Ala Ile Asn Ser Ile Gln His Asn
80 85 90
Thr Arg Ser Asn Val Ile Phe Tyr Ile Val Thr Leu Asn Asn Thr
95 100 105
Ala Asp His Leu Arg Ser Trp Leu Asn Ser Asp Ser Leu Lys Ser
110 115 120
Ile Arg Tyr Lys Ile Val Asn Phe Asp Pro Lys Leu Leu Glu Gly
125 130 135
Lys Val Lys Glu Asp Pro Asp Gln Gly Glu Ser Met Lys Pro Leu
140 145 150
Thr Phe Ala Arg Phe Tyr Leu Pro Ile Leu Val Pro Ser Ala Lys
155 160 165
Lys Ala Ile Tyr Met Asp Asp Asp Val Ile Val Gln Gly Asp Ile
170 175 180
Leu Ala Leu Tyr Asn Thr Ala Leu Lys Pro Gly His Ala Ala Ala

185										190					195				
Phe	Ser	Glu	Asp	Cys 200	Asp	Ser	Ala	Ser	Thr 205	Lys	Val	Val	Ile	Arg 210					
Gly	Ala	Gly	Asn	Gln 215	Tyr	Asn	Tyr	Ile	Gly 220	Tyr	Leu	Asp	Tyr	Lys 225					
Lys	Glu	Arg	Ile	Arg 230	Lys	Leu	Ser	Met	Lys 235	Ala	Ser	Thr	Cys	Ser 240					
Phe	Asn	Pro	Gly	Val 245	Phe	Val	Ala	Asn	Leu 250	Thr	Glu	Trp	Lys	Arg 255					
Gln	Asn	Ile	Thr	Asn 260	Gln	Leu	Glu	Lys	Trp 265	Met	Lys	Leu	Asn	Val 270					
Glu	Glu	Gly	Leu	Tyr 275	Ser	Arg	Thr	Leu	Ala 280	Gly	Ser	Ile	Thr	Thr 285					
Pro	Pro	Leu	Leu	Ile 290	Val	Phe	Tyr	Gln	Gln 295	His	Ser	Thr	Ile	Asp 300					
Pro	Met	Trp	Asn	Val 305	Arg	His	Leu	Gly	Ser 310	Ser	Ala	Gly	Lys	Arg 315					
Tyr	Ser	Pro	Gln	Phe 320	Val	Lys	Ala	Ala	Lys 325	Leu	Leu	His	Trp	Asn 330					
Gly	His	Leu	Lys	Pro 335	Trp	Gly	Arg	Thr	Ala 340	Ser	Tyr	Thr	Asp	Val 345					
Trp	Glu	Lys	Trp	Tyr 350	Ile	Pro	Asp	Pro	Thr 355	Gly	Lys	Phe	Asn	Leu 360					
Ile	Arg	Arg	Tyr	Thr 365	Glu	Ile	Ser	Asn	Ile 370	Lys									

```
<210> 172
<211> 585
<212> DNA
<213> Homo sapiens
```

```
<220>
<221> unsure
<222> 71, 76, 86, 91, 162, 220, 269, 281
<223> unknown base
```

```
<400> 172
tggttttttgc cccataaaatt ccctcagctt gagcagtttg ttaaggaatg 50
aggttacaga ttcaggaatt ntaggncttc aacctntaga ntttgtccca 100
aatgtttctcc gacatgcagt agatgggaga caagaggaga ttctgtggt 150
catcgctgca tntgaagaca ggcttggggg ggccattgca gctataaaca 200
gcattcagca caacactcgn tccaatgtga tttttctacat tgttactctc 250
aacaatacag cagaccatnt ccggtcctgg ntcaacagtg attccctgaa 300
aagcatcaga tacaaaattg tcaattttga ccctaaaactt ttggaaggaa 350
```

aagtaaagga ggatcctgac cagggggaat ccatgaaacc tttaaccttt 400
gcaaggttct acttgccaat tctggttccc agcgcaaaga aggccatata 450
catggatgat gatgtaattg tgcaagggtga tattcttgcc ctttacaata 500
cagcactgaa gccaggacat gcagctgcat tttcagaaga ttgtgattca 550
gcctctacta aagttgtcat ccgtggagca ggaaa 585

<210> 173

<211> 1866

<212> DNA

<213> Homo sapiens

<400> 173

cgacgtcta gcggttaccg ctgcgggctg gctgggcgta gtggggctgc 50
gcggctgcca cggagctaga gggcaagtgt gctcggccca gcgtgcaggg 100
aacgcgggcg gccagacaac gggctgggct ccggggcctg cggcgcgggc 150
gctgagctgg cagggcgggt cggggcgcgg gctgcatccg catctcctcc 200
atcgctgca gtaaggcgcg ccgcggcgag cctttgaggg gaacgacttg 250
tcggagccct aaccaggggt gtctctgagc ctggtgggat ccccgagcg 300
tcacatcact ttccgatcac ttcaaagtgg ttaaaaaacta atatttatat 350
gacagaagaa aaagatgtca ttccgtaaag taaacatcat catcttggtc 400
ctgggctgtt gctctcttct tactggtttt gcaccataac ttctcagct 450
tgaggcagtt tgtaaggaa tgagggtaca gattcaggaa ttgtagggcc 500
tcaacctata ggactttgtc ccaaatgctc tccgacatgc agtagatggg 550
agacaagagg agattcctgt ggtcatcgct gcatctgaag acaggcttgg 600
ggggggccatt gcagctataa acagcattca gcacaacact cgctccaatg 650
tgattttcta cattgttact ctcaacaata cagcagacca tctccggtcc 700
tgggctcaac agtgattccc tgaaaagcat cagatacaaa attgtcaatt 750
ttgaccctaa acttttgaa ggaaaagtaa aggaggatcc tgaccagggg 800
gaatccatga aacctttaac ctttgcaagg ttctacttgc caattctggg 850
ttcccagcgc aaagaaggcc atatacatgg atgatgatgt aattgtgcaa 900
ggtgatattc ttgcccttta caatacagca ctgaagccag gacatgcagc 950
tgcattttca gaagattgtg attcagcctc tactaaagtt gtcacccgtg 1000
gagcaggaaa ccagtacaat tacattggct atcttgacta taaaaaggaa 1050
agaattcgta agctttccat gaaagccagc acttgctcat ttaatcctgg 1100
agtttttgtt gcaaacctga cggaatggaa acgacagaat ataactaacc 1150
aactggaaaa atggatgaaa ctcaatgtag aagagggact gtatagcaga 1200

accctggctg gtagcatcac aacacctcct ctgcttatcg tattttatca 1250
acagcactct accatcgatc ctatgtggaa tgtccgccac cttggttcca 1300
gtgctggaaa acgatattca cctcagtttg taaaggctgc caagttactc 1350
cattggaatg gacatttgaa gccatgggga aggactgctt catatactga 1400
tgtttgggga aaaatggtat attccagacc caacaggcaa attcaaccta 1450
atccgaagat ataccgagat ctcaaacata aagtgaaca gaatttgaac 1500
tgtaagcaag catttctcag gaagtcctgg aagatagcat gcgtgggaag 1550
taacagttgc taggcttcaa tgcctatcgg tagcaagcca tggaaaaaga 1600
tgtgtcagct aggtaaagat gacaaactgc cctgtctggc agtcagcttc 1650
ccagacagac tatagactat aaatatgtct ccactctgcct taccaagtgt 1700
tttcttacta caatgctgaa tgactggaaa gaagaactga tatggctagt 1750
tcagctagct ggtacagata attcaaaact gctgttggtt ttaattttgt 1800
aacctgtggc ctgatctgta aataaaactt acatttttca ataggtaaaa 1850
aaaaaaaaa aaaaaa 1866

<210> 174
<211> 823
<212> DNA
<213> Homo sapiens

<400> 174
ctgcaggtag acatctccac tgcccaggaa tcaactgagcg tgcagacagc 50
acagcctcct ctgaaggccg gccataccag agtcctgcct cggcatgggc 100
ctcaccattg aggagctcc actgtctgtg ctggctctgag ggtgctgcct 150
gtcatggggg cagccatctc ccagggggcc ctcatcgcca togtctgcaa 200
cggctctctg ggcttcttgc tgctgctgct ctgggtcacc ctctgctggg 250
cctgccattc tcgtctgccg acgttgactc tctctctgaa tccagtccca 300
actccagccc tggcccctgt cctgagaagg cccaaccacc ccagaagccc 350
agccatgaag gcagctacct gctgcagccc tgaaggcccc tggcctagcc 400
tgagagccag gacctaagtc cacctcacct agagcctgga attaggatcc 450
cagagttcag ccagcctggg gtccagaact caagagtcog cctgcttgga 500
gctggacca gggcccca gtctagccag cttggctcca ataggagctc 550
agtggcccta aggagatggg cctgggggtg gggcttatga gttggtgcta 600
gagccagggc catctggact atgtccacc ccaagggcca agggtcaggg 650
gccgggtcca ctctttccct aggctgagca cctctaggcc ctctaggttg 700
gggaagcaaa ctggaacca tggcaataat aggaggggtgt ccaggctggg 750

cgtgccagca aatgactata gctggggcag tggttacttg ttatttcaac 800
 agaagtaaaa atgatcctcc tgatcatccc atcctttcgt ctctctccat 850
 tctcttcttc taccatcaag gaaccgttgt gaaaggggtca tttttaatct 900
 ctgtggtgag gattccgaga atcattgtca tgtacatgca aaacgcactg 950
 aaagaacagc agcatggtgc attgtccagg tacctgttcc gatgctgcta 1000
 ctgctgtttc tgggtgtcttg acaaatacct gctccatctc aaccagaatg 1050
 catatactac aactgctatt aatgggacag atttctgtac atcagcaaaa 1100
 gatgcattca aaatcttgtc caagaactca agtcacttta catctattaa 1150
 ctgcttttga gacttcataa tttttctagg aaagggtgtta gtgggtgtgtt 1200
 tcaactgtttt tggaggactc atggctttta actacaatcg ggcattccag 1250
 gtgtgggcag tccctctgtt attggtagct ttttttgcct acttagtagc 1300
 ccatagtttt ttatctgtgt ttgaaactgt gctggatgca cttttcctgt 1350
 gttttgctgt tgatctggaa acaaatgatg gatcgtcaga aaagccctac 1400
 tttatggatc aagaatttct gagtttcgta aaaaggagca acaaattaaa 1450
 caatgcaagg gcacagcagg acaagcactc attaaggaat gaggagggaa 1500
 cagaactcca ggccattgtg agatagatac ccatttaggt atctgtacct 1550
 ggaaaacatt tccttctaag agccatttac agaatagaag atgagaccac 1600
 tagagaaaag ttagtgaatt tttttttaa agacctaata aaccctattc 1650
 ttcctcaaaa 1660

<210> 177
 <211> 445
 <212> PRT
 <213> Homo sapiens

<400> 177
 Met Ser Gly Arg Asp Thr Ile Leu Gly Leu Cys Ile Leu Ala Leu
 1 5 10 15
 Ala Leu Ser Leu Ala Met Met Phe Thr Phe Arg Phe Ile Thr Thr
 20 25 30
 Leu Leu Val His Ile Phe Ile Ser Leu Val Ile Leu Gly Leu Leu
 35 40 45
 Phe Val Cys Gly Val Leu Trp Trp Leu Tyr Tyr Asp Tyr Thr Asn
 50 55 60
 Asp Leu Ser Ile Glu Leu Asp Thr Glu Arg Glu Asn Met Lys Cys
 65 70 75
 Val Leu Gly Phe Ala Ile Val Ser Thr Gly Ile Thr Ala Val Leu
 80 85 90
 Leu Val Leu Ile Phe Val Leu Arg Lys Arg Ile Lys Leu Thr Val

				95					100					105
Glu	Leu	Phe	Gln	Ile 110	Thr	Asn	Lys	Ala	Ile 115	Ser	Ser	Ala	Pro	Phe 120
Leu	Leu	Phe	Gln	Pro 125	Leu	Trp	Thr	Phe	Ala 130	Ile	Leu	Ile	Phe	Phe 135
Trp	Val	Leu	Trp	Val 140	Ala	Val	Leu	Leu	Ser 145	Leu	Gly	Thr	Ala	Gly 150
Ala	Ala	Gln	Val	Met 155	Glu	Gly	Gly	Gln	Val 160	Glu	Tyr	Lys	Pro	Leu 165
Ser	Gly	Ile	Arg	Tyr 170	Met	Trp	Ser	Tyr	His 175	Leu	Ile	Gly	Leu	Ile 180
Trp	Thr	Ser	Glu	Phe 185	Ile	Leu	Ala	Cys	Gln 190	Gln	Met	Thr	Ile	Ala 195
Gly	Ala	Val	Val	Thr 200	Cys	Tyr	Phe	Asn	Arg 205	Ser	Lys	Asn	Asp	Pro 210
Pro	Asp	His	Pro	Ile 215	Leu	Ser	Ser	Leu	Ser 220	Ile	Leu	Phe	Phe	Tyr 225
His	Gln	Gly	Thr	Val 230	Val	Lys	Gly	Ser	Phe 235	Leu	Ile	Ser	Val	Val 240
Arg	Ile	Pro	Arg	Ile 245	Ile	Val	Met	Tyr	Met 250	Gln	Asn	Ala	Leu	Lys 255
Glu	Gln	Gln	His	Gly 260	Ala	Leu	Ser	Arg	Tyr 265	Leu	Phe	Arg	Cys	Cys 270
Tyr	Cys	Cys	Phe	Trp 275	Cys	Leu	Asp	Lys	Tyr 280	Leu	Leu	His	Leu	Asn 285
Gln	Asn	Ala	Tyr	Thr 290	Thr	Thr	Ala	Ile	Asn 295	Gly	Thr	Asp	Phe	Cys 300
Thr	Ser	Ala	Lys	Asp 305	Ala	Phe	Lys	Ile	Leu 310	Ser	Lys	Asn	Ser	Ser 315
His	Phe	Thr	Ser	Ile 320	Asn	Cys	Phe	Gly	Asp 325	Phe	Ile	Ile	Phe	Leu 330
Gly	Lys	Val	Leu	Val 335	Val	Cys	Phe	Thr	Val 340	Phe	Gly	Gly	Leu	Met 345
Ala	Phe	Asn	Tyr	Asn 350	Arg	Ala	Phe	Gln	Val 355	Trp	Ala	Val	Pro	Leu 360
Leu	Leu	Val	Ala	Phe 365	Phe	Ala	Tyr	Leu	Val 370	Ala	His	Ser	Phe	Leu 375
Ser	Val	Phe	Glu	Thr 380	Val	Leu	Asp	Ala	Leu 385	Phe	Leu	Cys	Phe	Ala 390
Val	Asp	Leu	Glu	Thr 395	Asn	Asp	Gly	Ser	Ser 400	Glu	Lys	Pro	Tyr	Phe 405
Met	Asp	Gln	Glu	Phe	Leu	Ser	Phe	Val	Lys	Arg	Ser	Asn	Lys	Leu

	410		415		420
Asn Asn Ala Arg	Ala Gln Gln Asp Lys His Ser Leu Arg Asn Glu				
	425		430		435
Glu Gly Thr Glu	Leu Gln Ala Ile Val Arg				
	440		445		

<210> 178
 <211> 2773
 <212> DNA
 <213> Homo sapiens

<400> 178
 gttcgattag ctccctctgag aagaagagaa aaggttcttg gacctctccc 50
 tgtttcttcc ttagaataat ttgtatggga tttgtgatgc aggaaagcct 100
 aagggaaaaa gaattattcat tctgtgtggt gaaaattttt tgaaaaaaa 150
 attgccttct tcaacaagg gtgtcattct gatatttatg aggactgttg 200
 ttctcactat gaaggcatct gttattgaaa tgttccttgt tttgctggtg 250
 actggagtac attcaaaca agaaacggca aagaagatta aaaggcccaa 300
 gttcactgtg cctcagatca actgogatgt caaagccgga aagatcatcg 350
 atcctgagtt cattgtgaaa tgtccagcag gatgccaaga ccccaaatac 400
 catgtttatg gcactgacgt gtatgcatcc tactccagtg tgtgtggcgc 450
 tgccgtacac agtggtgtgc ttgataattc aggagggaaa ataacttgttc 500
 ggaagggtgc tggacagtct ggttacaag ggagttattc caacggtgtc 550
 caatcgttat ccctaccacg atggagagaa tcctttatcg tcttagaaag 600
 taaacccaaa aagggtgtaa cctaccatc agctottaca tactcatcat 650
 cgaaaagtcc agctgcccac gcaggtgaga ccacaaaagc ctatcagagg 700
 ccacctattc cagggacaac tgcacagccg gtcactctga tgcagcttct 750
 ggctgtcact gtagctgtgg ccacccccac caccttgcca aggccatccc 800
 cttctgctgc ttctaccacc agcatcccca gaccacaatc agtgggcccac 850
 aggagccagg agatggatct ctggtccact gccacctaca caagcagcca 900
 aaacaggccc agagctgatc caggtatcca aaggcaagat ccttcaggag 950
 ctgccttcca gaaacctgtt ggagcggatg tcagcctggg acttgttcca 1000
 aaagaagaat tgagcacaca gtctttggag ccagtatccc tgggagatcc 1050
 aaactgcaaa attgacttgt cgtttttaat tgatgggagc accagcattg 1100
 gcaaacggcg attccgaatc cagaagcagc tcctggctga tgttgcccaa 1150
 gctcttgaca ttggccctgc cggtcactg atgggtgttg tccagtatgg 1200
 agacaaccct gctactcact ttaacctcaa gacacacacg aattctcgag 1250

atctgaagac agccatagag aaaattactc agagaggagg acttttctaata 1300
 gtaggtcggg ccatctcctt tgtgaccaag aacttctttt ccaaagccaa 1350
 tggaaacaga agcgggggctc ccaatgtggt ggtggtgatg gtggatggct 1400
 ggcccacgga caaagtggag gaggcttcaa gacttgcgag agagtcagga 1450
 atcaacattt tcttcacac cattgaaggt gctgctgaaa atgagaagca 1500
 gtatgtggtg gagcccaact ttgcaaaaca ggccgtgtgc agaacaaacg 1550
 gcttctactc gctccacgtg cagagctggt ttggcctcca caagaccctg 1600
 cagcctctgg tgaagcgggt ctgcgacact gaccgcctgg cctgcagcaa 1650
 gacctgcttg aactcggctg acattggctt cgtcatcgac ggctccagca 1700
 gtgtggtgggac gggcaacttc cgcaccgtcc tccagtttgt gaccaacctc 1750
 accaaagagt ttgagatttc cgacacggac acgcgcatcg gggccgtgca 1800
 gtacacctac gaacagcggc tggagtttgg gttcgacaag tacagcagca 1850
 agcctgacat cctcaacgcc atcaagaggg tgggctactg gagtgggtggc 1900
 accagcacgg gggctgccat caacttcgcc ctggagcagc tcttcaagaa 1950
 gtccaagccc aacaagagga agttaatgat cctcatcacc gacgggaggt 2000
 cctacgacga cgtccggatc ccagccatgg ctgcccattc gaagggagtg 2050
 atcacctatg cgataggcgt tgccctgggct gcccaagagg agctagaagt 2100
 cattgccact caccocgcca gagaccactc cttctttgtg gacgagtttg 2150
 acaacctcca tcagtatgtc cccaggatca tccagaacat ttgtacagag 2200
 ttcaactcac agcctcggaa ctgaattcag agcaggcaga gcaccagcaa 2250
 gtgctgcttt actaactgac gtgttggacc accccaccgc ttaatggggc 2300
 acgcacggtg catcaagtct tgggcagggc atggagaaac aaatgtcttg 2350
 ttattattct ttgccatcat gctttttcat attccaaaac ttggagttac 2400
 aaagatgatc acaaacgtat agaatgagcc aaaaggctac atcatgttga 2450
 ggggtgctgga gattttacat ttgacaatt gttttcaaaa taaatgttcg 2500
 gaatacagtg cagcccttac gacaggctta cgtagagctt ttgtgagatt 2550
 ttttaagttgt tatttctgat ttgaactctg taaccctcag caagtttcat 2600
 ttttgtcatg acaatgtagg aattgctgaa ttaaatgttt agaaggatga 2650
 aaaataaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2700
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2750
 aaaaaaaaaa aaaaaaaaaa aag 2773

[illegible]

Met 1	Arg	Thr	Val	Val 5	Leu	Thr	Met	Lys	Ala 10	Ser	Val	Ile	Glu	Met 15
Phe	Leu	Val	Leu	Leu 20	Val	Thr	Gly	Val	His 25	Ser	Asn	Lys	Glu	Thr 30
Ala	Lys	Lys	Ile	Lys 35	Arg	Pro	Lys	Phe	Thr 40	Val	Pro	Gln	Ile	Asn 45
Cys	Asp	Val	Lys	Ala 50	Gly	Lys	Ile	Ile	Asp 55	Pro	Glu	Phe	Ile	Val 60
Lys	Cys	Pro	Ala	Gly 65	Cys	Gln	Asp	Pro	Lys 70	Tyr	His	Val	Tyr	Gly 75
Thr	Asp	Val	Tyr	Ala 80	Ser	Tyr	Ser	Ser	Val 85	Cys	Gly	Ala	Ala	Val 90
His	Ser	Gly	Val	Leu 95	Asp	Asn	Ser	Gly	Gly 100	Lys	Ile	Leu	Val	Arg 105
Lys	Val	Ala	Gly	Gln 110	Ser	Gly	Tyr	Lys	Gly 115	Ser	Tyr	Ser	Asn	Gly 120
Val	Gln	Ser	Leu	Ser 125	Leu	Pro	Arg	Trp	Arg 130	Glu	Ser	Phe	Ile	Val 135
Leu	Glu	Ser	Lys	Pro 140	Lys	Lys	Gly	Val	Thr 145	Tyr	Pro	Ser	Ala	Leu 150
Thr	Tyr	Ser	Ser	Ser 155	Lys	Ser	Pro	Ala	Ala 160	Gln	Ala	Gly	Glu	Thr 165
Thr	Lys	Ala	Tyr	Gln 170	Arg	Pro	Pro	Ile	Pro 175	Gly	Thr	Thr	Ala	Gln 180
Pro	Val	Thr	Leu	Met 185	Gln	Leu	Leu	Ala	Val 190	Thr	Val	Ala	Val	Ala 195
Thr	Pro	Thr	Thr	Leu 200	Pro	Arg	Pro	Ser	Pro 205	Ser	Ala	Ala	Ser	Thr 210
Thr	Ser	Ile	Pro	Arg 215	Pro	Gln	Ser	Val	Gly 220	His	Arg	Ser	Gln	Glu 225
Met	Asp	Leu	Trp	Ser 230	Thr	Ala	Thr	Tyr	Thr 235	Ser	Ser	Gln	Asn	Arg 240
Pro	Arg	Ala	Asp	Pro 245	Gly	Ile	Gln	Arg	Gln 250	Asp	Pro	Ser	Gly	Ala 255
Ala	Phe	Gln	Lys	Pro 260	Val	Gly	Ala	Asp	Val 265	Ser	Leu	Gly	Leu	Val 270
Pro	Lys	Glu	Glu	Leu 275	Ser	Thr	Gln	Ser	Leu 280	Glu	Pro	Val	Ser	Leu 285
Gly	Asp	Pro	Asn	Cys	Lys	Ile	Asp	Leu	Ser	Phe	Leu	Ile	Asp	Gly

	605		610		615
Ala His Leu Lys	Gly Val Ile Thr Tyr	Ala Ile Gly Val Ala Trp			
	620	625		630	
Ala Ala Gln Glu	Glu Leu Glu Val Ile	Ala Thr His Pro Ala Arg			
	635	640		645	
Asp His Ser Phe	Phe Val Asp Glu Phe	Asp Asn Leu His Gln Tyr			
	650	655		660	
Val Pro Arg Ile	Ile Gln Asn Ile Cys	Thr Glu Phe Asn Ser Gln			
	665	670		675	
Pro Arg Asn					

<210> 180
 <211> 1759
 <212> DNA
 <213> Homo sapiens

<400> 180
 caggatgaac tggttgcagt ggctgctgct gctgcggggg cgctgagagg 50
 acacgagctc tatgcctttc cggctgctca tcccgcctcg cctcctgtgc 100
 gcgctgctgc ctcagcacca tggcgcgcca ggtcccgcgc gctccgcgcc 150
 agatcccgcc cactacagtt tttctctgac tctaattgat gcaactggaca 200
 ccttgctgat tttggggaat gtctcagaat tccaaagagt ggttgaagtg 250
 ctccaggaca gcgtggactt tgatattgat gtgaacgcct ctgtgtttga 300
 aacaaacatt cgagtggtag gaggactcct gtctgctcat ctgctctcca 350
 agaaggctgg ggtggaagta gaggctggat ggccctgttc cgggcctctc 400
 ctgagaatgg ctgaggaggc ggcccgaata ctctcccag cctttcagac 450
 cccactggc atgccatag gaacagtga cttacttcat ggctgaacc 500
 caggagagac ccctgtcacc tgtacggcag ggattgggac cttcattgtt 550
 gaatttgcca ccctgagcag cctcactggt gaccgcgtgt tcgaagatgt 600
 ggccagagtg gctttgatgc gcctctggga gagccggtca gatatcgggc 650
 tggcggcaa ccacattgat gtgctcactg gcaagtgggt ggcccaggac 700
 gcaggcatcg gggctggcgt ggactcctac tttgagtact tggtgaaagg 750
 agccatcctg cttcaggata agaagctcat ggccatgttc ctagagtata 800
 acaaagccat ccggaactac acccgcttcg atgactggta cctgtggggt 850
 cagatgtaca aggggactgt gtccatgcca gtcttcacgt ccttgagggc 900
 ctactggcct ggtcttcaga gcctcattgg agacattgac aatgccatga 950
 ggaccttcct caactactac actgtatgga agcagtttgg ggggctcccg 1000

gaattctaca acattcctca gggatacaca gtggagaagc gagagggcta 1050
 cccacttcgg ccagaactta ttgaaagcgc aatgtacctc taccgtgccca 1100
 cgggggatcc caccctccta gaactcggaa gagatgctgt ggaatccatt 1150
 gaaaaaatca gcaaggtgga gtgcggattt gcaacaatca aagatctgcg 1200
 agaccacaag ctggacaacc gcatggagtc gttcttcctg gccgagactg 1250
 tgaaatacct ctacctcctg tttgacccaa ccaacttcat ccacaacaat 1300
 ggggtccacct tcgacgcggg gatcaccccc tatggggagt gcacccctggg 1350
 ggctgggggg tacatcttca acacagaagc tcaccccatc gaccttgccg 1400
 ccctgcactg ctgccagagg ctgaaggaag agcagtggga ggtggaggac 1450
 ttgatgaggg aattctactc tctcaaacgg agcaggtcga aatttcagaa 1500
 aaacactgtt agttcggggc catgggaacc tccagcaagg ccaggaacac 1550
 tcttctcacc agaaaacat gaccaggcaa gggagaggaa gcctgccaaa 1600
 cagaaggtcc cacttctcag ctgccccagt cagcccttca cctccaagtt 1650
 ggcattactg ggacaggttt tcctagactc ctcataacca ctggataatt 1700
 tttttatttt tatttttttg aggctaaact ataataaatt gcttttggct 1750
 atcataaaa 1759

<210> 181
 <211> 541
 <212> PRT
 <213> Homo sapiens

<400> 181
 Met Pro Phe Arg Leu Leu Ile Pro Leu Gly Leu Leu Cys Ala Leu
 1 5 10 15
 Leu Pro Gln His His Gly Ala Pro Gly Pro Asp Gly Ser Ala Pro
 20 25 30
 Asp Pro Ala His Tyr Ser Phe Ser Leu Thr Leu Ile Asp Ala Leu
 35 40 45
 Asp Thr Leu Leu Ile Leu Gly Asn Val Ser Glu Phe Gln Arg Val
 50 55 60
 Val Glu Val Leu Gln Asp Ser Val Asp Phe Asp Ile Asp Val Asn
 65 70 75
 Ala Ser Val Phe Glu Thr Asn Ile Arg Val Val Gly Gly Leu Leu
 80 85 90
 Ser Ala His Leu Leu Ser Lys Lys Ala Gly Val Glu Val Glu Ala
 95 100 105
 Gly Trp Pro Cys Ser Gly Pro Leu Leu Arg Met Ala Glu Glu Ala
 110 115 120
 Ala Arg Lys Leu Leu Pro Ala Phe Gln Thr Pro Thr Gly Met Pro

440	445	450
Cys Gln Arg Leu Lys Glu Glu Gln Trp	Glu Val Glu Asp Leu Met	
455	460	465
Arg Glu Phe Tyr Ser Leu Lys Arg Ser	Arg Ser Lys Phe Gln Lys	
470	475	480
Asn Thr Val Ser Ser Gly Pro Trp Glu	Pro Pro Ala Arg Pro Gly	
485	490	495
Thr Leu Phe Ser Pro Glu Asn His Asp	Gln Ala Arg Glu Arg Lys	
500	505	510
Pro Ala Lys Gln Lys Val Pro Leu Leu	Ser Cys Pro Ser Gln Pro	
515	520	525
Phe Thr Ser Lys Leu Ala Leu Leu Gly	Gln Val Phe Leu Asp Ser	
530	535	540

Ser

<210> 182
 <211> 2056
 <212> DNA
 <213> Homo sapiens

<400> 182
 aaagttacat tttctctgga actctcctag gccactccct gctgatgcaa 50
 catctggggt tgggcagaaa ggagggtgct tcggagcccg ccctttctga 100
 gcttcctggg ccggctctag aacaattcag gcttcgctgc gactcagacc 150
 tcagctccaa catatgcatt ctgaagaaag atggctgaga tggacagaat 200
 gctttatattt ggaaagaaac aatgttctag gtcaaactga gtctacaaaa 250
 tgcagacttt cacaatgggt ctagaagaaa tctggacaag tcttttcatg 300
 tggtttttct acgcattgat tccatgtttg ctacacagatg aagtggccat 350
 tctgcctgcc cctcagaacc tctctgtact ctcaaccaac atgaagcatc 400
 tcttgatgtg gagcccagtg atcgcgctg gagaaacagt gtactattct 450
 gtcgaatacc agggggagta cgagagcctg tacacgagcc acatctggat 500
 ccccagcagc tgggtgctcac tcaactgaagg tcctgagtgt gatgtcactg 550
 atgacatcac ggccactgtg ccatacaacc ttctgtgtcag ggccacattg 600
 ggctcacaga cctcagcctg gagcatcctg aagcatccct ttaatagaaa 650
 ctcaaccatc cttacccgac ctgggatgga gatcaccaaa gatggcttcc 700
 acctggttat tgagctggag gacctggggc ccagtttga gttccttgtg 750
 gcctactgga ggaggagcc tggtgccgag gaacatgtca aaatgggtgag 800
 gagtgggggt attccagtgc acctagaaac catggagcca ggggctgcat 850

actgtgtgaa ggcccagaca ttcgtgaagg ccattgggag gtacagcgcc 900
 ttcagccaga cagaatgtgt ggaggtgcaa ggagaggcca ttcccctggt 950
 actggccctg tttgcctttg ttggcttcat gctgatcctt gtggtcgtgc 1000
 cactgttcgt ctggaaaatg ggccggctgc tccagtactc ctgttgcccc 1050
 gtggtggtcc tcccagacac cttgaaaata accaattcac cccagaagtt 1100
 aatcagctgc agaagggagg aggtggatgc ctgtgccacg gctgtgatgt 1150
 ctctgagga actctcagg gcctggatct cataggtttg cggaagggcc 1200
 caggtgaagc cgagaacctg gtctgcatga catggaaacc atgaggggac 1250
 aagtttgttt tctgttttcc gccacggaca agggatgaga gaagtaggaa 1300
 gagcctgttg tctacaagtc tagaagcaac catcagaggc agggtggttt 1350
 gtctaacaga aactgactg aggcctaggg gatgtgacct ctagactggg 1400
 ggctgccact tgctggctga gcaaccctgg gaaaagtgc ttcattccctt 1450
 cggtcctaag ttttctcatc tgtaatgggg gaattaccta cacacctgct 1500
 aaacacacac acacagagtc tctctctata tatacacacg tacacataaa 1550
 tacaccagc acttgcaagg ctagaggga actggtgaca ctctacagtc 1600
 tgactgattc agtgtttctg gagagcagga cataaatgta tgatgagaat 1650
 gatcaaggac tctacacact ggggtggcttg gagagccac tttcccagaa 1700
 taatccttga gagaaaagga atcatgggag caatggtgtt gagttcactt 1750
 caagcccaat gccggtgcag aggggaatgg cttagcgagc tctacagtag 1800
 gtgacctgga ggaaggtcac agccacactg aaaatgggat gtgcatgaac 1850
 acggaggatc catgaactac tgtaaagtgt tgacagtgtg tgcacactgc 1900
 agacagcagg tgaaatgtat gtgtgcaatg cgacgagaat gcagaagtca 1950
 gtaacatgtg catgtttgtt gtgtccttt tttctgttg taaagtacag 2000
 aattcagcaa ataaaaagg ccaccctggc caaaagcgggt aaaaaaaaaa 2050
 aaaaaa 2056

<210> 183
 <211> 311
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> Signal peptide
 <222> 1-29
 <223> Signal peptide

 <220>
 <221> N-glycosylation sites
 <222> 40-43, 134-137

<223> N-glycosylation sites.

<220>

<221> Tissue factor proteins homology

<222> 92-119

<223> Tissue factor proteins homology

<220>

<221> Transmembrane domain

<222> 230-255

<223> Transmembrane domain

<220>

<221> Integrins alpha chain protein homology

<222> 232-262

<223> Integrins alpha chain protein homology

<400> 183

Met Gln Thr Phe Thr Met Val Leu Glu Glu Ile Trp Thr Ser Leu
1 5 10 15

Phe Met Trp Phe Phe Tyr Ala Leu Ile Pro Cys Leu Leu Thr Asp
20 25 30

Glu Val Ala Ile Leu Pro Ala Pro Gln Asn Leu Ser Val Leu Ser
35 40 45

Thr Asn Met Lys His Leu Leu Met Trp Ser Pro Val Ile Ala Pro
50 55 60

Gly Glu Thr Val Tyr Tyr Ser Val Glu Tyr Gln Gly Glu Tyr Glu
65 70 75

Ser Leu Tyr Thr Ser His Ile Trp Ile Pro Ser Ser Trp Cys Ser
80 85 90

Leu Thr Glu Gly Pro Glu Cys Asp Val Thr Asp Asp Ile Thr Ala
95 100 105

Thr Val Pro Tyr Asn Leu Arg Val Arg Ala Thr Leu Gly Ser Gln
110 115 120

Thr Ser Ala Trp Ser Ile Leu Lys His Pro Phe Asn Arg Asn Ser
125 130 135

Thr Ile Leu Thr Arg Pro Gly Met Glu Ile Thr Lys Asp Gly Phe
140 145 150

His Leu Val Ile Glu Leu Glu Asp Leu Gly Pro Gln Phe Glu Phe
155 160 165

Leu Val Ala Tyr Trp Arg Arg Glu Pro Gly Ala Glu Glu His Val
170 175 180

Lys Met Val Arg Ser Gly Gly Ile Pro Val His Leu Glu Thr Met
185 190 195

Glu Pro Gly Ala Ala Tyr Cys Val Lys Ala Gln Thr Phe Val Lys
200 205 210

Ala Ile Gly Arg Tyr Ser Ala Phe Ser Gln Thr Glu Cys Val Glu
215 220 225

Val	Gln	Gly	Glu	Ala	Ile	Pro	Leu	Val	Leu	Ala	Leu	Phe	Ala	Phe	
				230					235					240	
Val	Gly	Phe	Met	Leu	Ile	Leu	Val	Val	Val	Pro	Leu	Phe	Val	Trp	
				245					250					255	
Lys	Met	Gly	Arg	Leu	Leu	Gln	Tyr	Ser	Cys	Cys	Pro	Val	Val	Val	
				260					265					270	
Leu	Pro	Asp	Thr	Leu	Lys	Ile	Thr	Asn	Ser	Pro	Gln	Lys	Leu	Ile	
				275					280					285	
Ser	Cys	Arg	Arg	Glu	Glu	Val	Asp	Ala	Cys	Ala	Thr	Ala	Val	Met	
				290					295					300	
Ser	Pro	Glu	Glu	Leu	Leu	Arg	Ala	Trp	Ile	Ser					
				305					310						

<210> 184
 <211> 808
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 654, 711, 748
 <223> unknown base

<400> 184
 tcctgctgat gcacatctgg gtttggcaaa aggaggttgc ttcgagccgc 50
 cctttctagc ttctggccg gctctagaac aattcaggct tcgctgcgac 100
 tagacctcag ctccaacata tgcattctga agaaagatgg ctgagatgac 150
 agaatgcttt attttggaaa gaaacaatgt tctaggtcaa actgagtcta 200
 ccaaatgcag actttcaciaa tggttctaga agaaatctgg acaagtcttt 250
 tcatgtggtt tttctacgca ttgattccat gtttgctcac agatgaagtg 300
 gccattctgc ctgcccctca gaacctctct gtactctcaa ccaacatgaa 350
 gcatctcttg atgtggagcc cagtgatcgc gcctggagaa acagtgtact 400
 attctgtcga ataccagggg gactacgaga gcctgtacac gagccacatc 450
 tggatcccca gcagctggtg ctactcact gaaggtcctg agtgtgatgt 500
 cactgatgac atcacggcca ctgtgccata caacctttgt gtcagggccca 550
 cattgggctc acagacctca gcctggagca tcctgaagca tccctttaat 600
 agaaactcaa ccaccttac ccgacctggg atggagatca ccaaagatgg 650
 cttncacctg gttattgagc tggaggacct ggggccccag tttgagttcc 700
 ttgtggccta ntggaggagg ggcgaacccc ttgcggcgca aggggttngc 750
 gaaccccttg cggccgctgg ggtatctctc gagaaaagag aggcccaata 800
 tgaccac 808

<210> 185
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 185
aggcttcgct gcgactagac ctc 23

<210> 186
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 186
ccaggtcggg taaggatggt tgag 24

<210> 187
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 187
tttctacgca ttgattccat gtttgctcac agatgaagtg gccattctgc 50

<210> 188
<211> 1227
<212> DNA
<213> Homo sapiens

<400> 188
cggacgcgtg ggccgccacc tccggaacaa gccatggtgg cggcgacggt 50
ggcagcggcg tggctgctcc tgtgggctgc ggcctgcgcg cagcaggagc 100
aggacttcta cgacttcaag gcggtcaaca tccggggcaa actggtgtcg 150
ctggagaagt accgcggatc ggtgtccctg gtggtgaatg tggccagcga 200
gtgcggcttc acagaccagc actaccgagc cctgcagcag ctgcagcgag 250
acctgggccc ccaccacttt aacgtgctcg ccttcccctg caaccagttt 300
ggccaacagg agcctgacag caacaaggag attgagagct ttgcccgccg 350
cacctacagt gtctcattcc ccatgtttag caagattgca gtcaccggtg 400
ctggtgcccc tctgccttc aagtacctgg cccagacttc tgggaaggag 450
cccacctgga acttctggaa gtacctagta gcccagatg gaaagggtgt 500
aggggcttgg gacccaactg tgtcagtgga ggaggtcaga ccccagatca 550
cagcgctcgt gaggaagctc atcctactga agcgagaaga cttataacca 600

ccgcgtctcc tcctccacca cctcatcccg cccacctgtg tggggctgac 650
 caatgcaaac tcaaattggtg cttcaaaggg agagaccac tgactctcct 700
 tcctttactc ttatgccatt ggtcccatca ttcttgtggg ggaaaaattc 750
 tagtattttg attatttgaa tcttacagca acaaatagga actcctgggc 800
 aatgagagct ctgaccagt gaatcaccag ccgatacgaa cgtcttgcca 850
 acaaaaatgt gtggcaaata gaagtatatc aagcaataat ctcccaccca 900
 aggcttctgt aaactgggac caatgattac ctcatagggc tgttgtgagg 950
 attaggatga aatacctgtg aaagtgccta ggcagtgcc gccaaatagg 1000
 aggcattcaa tgaacatttt ttgcatataa accaaaaaat aacttgttat 1050
 caataaaaac ttgcatccaa catgaatttc cagccgatga taatccaggc 1100
 caaaggttta gttgttgta tttcctctgt attattttct tcattacaaa 1150
 agaaatgcaa gttcattgta acaatccaaa caatacctca cgatataaaa 1200
 taaaaatgaa agtatcctcc tcaaaaa 1227

<210> 189
 <211> 187
 <212> PRT
 <213> Homo sapiens

<400> 189
 Met Val Ala Ala Thr Val Ala Ala Ala Trp Leu Leu Leu Trp Ala
 1 5 10 15
 Ala Ala Cys Ala Gln Gln Glu Gln Asp Phe Tyr Asp Phe Lys Ala
 20 25 30
 Val Asn Ile Arg Gly Lys Leu Val Ser Leu Glu Lys Tyr Arg Gly
 35 40 45
 Ser Val Ser Leu Val Val Asn Val Ala Ser Glu Cys Gly Phe Thr
 50 55 60
 Asp Gln His Tyr Arg Ala Leu Gln Gln Leu Gln Arg Asp Leu Gly
 65 70 75
 Pro His His Phe Asn Val Leu Ala Phe Pro Cys Asn Gln Phe Gly
 80 85 90
 Gln Gln Glu Pro Asp Ser Asn Lys Glu Ile Glu Ser Phe Ala Arg
 95 100 105
 Arg Thr Tyr Ser Val Ser Phe Pro Met Phe Ser Lys Ile Ala Val
 110 115 120
 Thr Gly Thr Gly Ala His Pro Ala Phe Lys Tyr Leu Ala Gln Thr
 125 130 135
 Ser Gly Lys Glu Pro Thr Trp Asn Phe Trp Lys Tyr Leu Val Ala
 140 145 150
 Pro Asp Gly Lys Val Val Gly Ala Trp Asp Pro Thr Val Ser Val

155	160	165
Glu Glu Val Arg Pro Gln Ile Thr Ala	Leu Val Arg Lys Leu	Ile
170	175	180
Leu Leu Lys Arg Glu Asp Leu		
185		

<210> 190
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 190
 gcaggacttc tacgacttca aggc 24

<210> 191
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 191
 agtctgggcc aggtacttga aggc 24

<210> 192
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 192
 caacatccgg ggcaaactgg tgtcgctgga gaagtaccgc ggatcgggtgt 50

<210> 193
 <211> 2187
 <212> DNA
 <213> Homo sapiens

<400> 193
 cggacgcgtg ggcgggccgg gacgcagggc aaagcgagcc atggctgtct 50
 acgtcgggat gctgcgctg gggaggctgt gcgccgggag ctcgggggtg 100
 ctggggggccc gggccgcct ctctcgaggt tggcaggaag ccaggttgca 150
 ggggtgtccgc ttcctcagtt ccagagaggt ggatcgcagt gtctccacgc 200
 ccatcgagg cctcagctac gttcaggggt gcacaaaaa gcatcttaac 250
 agcaagactg tgggccagt cctggagacc acagcacaga ggggccaga 300
 acgagaggcc ttggtcgtcc tccatgaaga cgtcaggttg acctttgcc 350
 aactcaagga ggaggtggac aaagctgctt ctggcctcct gagcattggc 400

ctctgcaaag gtgaccggct gggcatgtgg ggacctaact cctatgcatg 450
 ggtgctcatg cagttggcca ccgcccaggc gggcatcatt ctggtgtctg 500
 tgaaccacagc ctaccaggct atggaactgg agtatgtcct caagaagggtg 550
 ggctgcaaagg cccttgtgtt cccaagcaa ttcaagacc agcaatacta 600
 caacgtcctg aagcagatct gtccagaagt ggagaatgcc cagccagggg 650
 ccttgaagag tcagaggctc ccagatctga ccacagtcac ctcggtggat 700
 gcccctttgc cggggaccct gctcctggat gaagtgggtg cggctggcag 750
 cacacggcag catctggacc agctccaata caaccagcag ttctgtcct 800
 gccatgacc catcaacatc cagttcacct cggggacaac aggagcccc 850
 aagggggcca ccctctcca ctacaacatt gtcaacaact ccaacatttt 900
 aggagagcgc ctgaaactgc atgagaagac accagagcag ttgcggatga 950
 tcctgccccaa cccctgtac cattgcctgg gttccgtggc aggacacatg 1000
 atgtgtctga tgtacggtgc caccctcatc ctggcctctc ccatcttcaa 1050
 tggcaagaag gactggagg ccatcagcag agagagaggc accttctgt 1100
 atggtacccc cacgatgttc gtggacattc tgaaccagcc agacttctcc 1150
 agttatgaca tctcgaccat gtgtggagggt gtcattgctg ggtcccctgc 1200
 acctccagag ttgatccgag ccatcatcaa caagataaat atgaaggacc 1250
 tgggtggttgc ttatggaacc acagagaaca gtcccgtgac attcgcgcac 1300
 ttccctgagg aactgtgga gcagaaggca gaaagcgtgg gcagaattat 1350
 gcctcacacg gaggcccgga tcatgaacat ggaggcaggg acgctggcaa 1400
 agctgaacac gcccggggag ctgtgcatcc gaggggtactg cgtcatgctg 1450
 ggctactggg gtgagcctca gaagacagag gaagcagtgg atcaggacaa 1500
 gtggtatttg acaggagatg tcgccacaat gaatgagcag ggcttctgca 1550
 agatcgtggg ccgctctaag gatgatgaca tccgggggtg tgagaacatc 1600
 taccgccgag agctcgagga cttctttcac acacaccga aggtgcagga 1650
 agtgcagggt gtgggagtga aggacgatcg gatgggggaa gagatttgtg 1700
 cctgcattcg gctgaaggac ggggaggaga ccacggtgga ggagataaaa 1750
 gctttctgca aagggaagat ctctcacttc aagattccga agtacatcgt 1800
 gtttgcaca aactaccccc tcaccatttc aggaagatc cagaaattca 1850
 aacttcgaga gcagatggaa cgacatctaa atctgtgaat aaagcagcag 1900
 gcctgtcctg gccggttggc ttgactctct cctgtcagaa tgcaacctgg 1950
 ctttatgcac ctagatgtcc ccagaccca gttctgagcc aggacatca 2000

aatgtcaagg aattgactga acgaactaag agctcctgga tgggtccggg 2050
aactgcctg ggcacaagg gcaaaaaggc aggcagcctg cccaggccct 2100
ccctcctgtc catccccac attcccctgt ctgtccttgt gatttggcat 2150
aaagagcttc tgttttcttt gaaaaaaaaa aaaaaaa 2187

<210> 194
<211> 615
<212> PRT
<213> Homo sapiens

<400> 194
Met Ala Val Tyr Val Gly Met Leu Arg Leu Gly Arg Leu Cys Ala
1 5 10 15
Gly Ser Ser Gly Val Leu Gly Ala Arg Ala Ala Leu Ser Arg Ser
20 25 30
Trp Gln Glu Ala Arg Leu Gln Gly Val Arg Phe Leu Ser Ser Arg
35 40 45
Glu Val Asp Arg Met Val Ser Thr Pro Ile Gly Gly Leu Ser Tyr
50 55 60
Val Gln Gly Cys Thr Lys Lys His Leu Asn Ser Lys Thr Val Gly
65 70 75
Gln Cys Leu Glu Thr Thr Ala Gln Arg Val Pro Glu Arg Glu Ala
80 85 90
Leu Val Val Leu His Glu Asp Val Arg Leu Thr Phe Ala Gln Leu
95 100 105
Lys Glu Glu Val Asp Lys Ala Ala Ser Gly Leu Leu Ser Ile Gly
110 115 120
Leu Cys Lys Gly Asp Arg Leu Gly Met Trp Gly Pro Asn Ser Tyr
125 130 135
Ala Trp Val Leu Met Gln Leu Ala Thr Ala Gln Ala Gly Ile Ile
140 145 150
Leu Val Ser Val Asn Pro Ala Tyr Gln Ala Met Glu Leu Glu Tyr
155 160 165
Val Leu Lys Lys Val Gly Cys Lys Ala Leu Val Phe Pro Lys Gln
170 175 180
Phe Lys Thr Gln Gln Tyr Tyr Asn Val Leu Lys Gln Ile Cys Pro
185 190 195
Glu Val Glu Asn Ala Gln Pro Gly Ala Leu Lys Ser Gln Arg Leu
200 205 210
Pro Asp Leu Thr Thr Val Ile Ser Val Asp Ala Pro Leu Pro Gly
215 220 225
Thr Leu Leu Leu Asp Glu Val Val Ala Ala Gly Ser Thr Arg Gln
230 235 240
His Leu Asp Gln Leu Gln Tyr Asn Gln Gln Phe Leu Ser Cys His

245										250					255				
Asp	Pro	Ile	Asn	Ile	Gln	Phe	Thr	Ser	Gly	Thr	Thr	Gly	Ser	Pro					
				260					265					270					
Lys	Gly	Ala	Thr	Leu	Ser	His	Tyr	Asn	Ile	Val	Asn	Asn	Ser	Asn					
				275					280					285					
Ile	Leu	Gly	Glu	Arg	Leu	Lys	Leu	His	Glu	Lys	Thr	Pro	Glu	Gln					
				290					295					300					
Leu	Arg	Met	Ile	Leu	Pro	Asn	Pro	Leu	Tyr	His	Cys	Leu	Gly	Ser					
				305					310					315					
Val	Ala	Gly	Thr	Met	Met	Cys	Leu	Met	Tyr	Gly	Ala	Thr	Leu	Ile					
				320					325					330					
Leu	Ala	Ser	Pro	Ile	Phe	Asn	Gly	Lys	Lys	Ala	Leu	Glu	Ala	Ile					
				335					340					345					
Ser	Arg	Glu	Arg	Gly	Thr	Phe	Leu	Tyr	Gly	Thr	Pro	Thr	Met	Phe					
				350					355					360					
Val	Asp	Ile	Leu	Asn	Gln	Pro	Asp	Phe	Ser	Ser	Tyr	Asp	Ile	Ser					
				365					370					375					
Thr	Met	Cys	Gly	Gly	Val	Ile	Ala	Gly	Ser	Pro	Ala	Pro	Pro	Glu					
				380					385					390					
Leu	Ile	Arg	Ala	Ile	Ile	Asn	Lys	Ile	Asn	Met	Lys	Asp	Leu	Val					
				395					400					405					
Val	Ala	Tyr	Gly	Thr	Thr	Glu	Asn	Ser	Pro	Val	Thr	Phe	Ala	His					
				410					415					420					
Phe	Pro	Glu	Asp	Thr	Val	Glu	Gln	Lys	Ala	Glu	Ser	Val	Gly	Arg					
				425					430					435					
Ile	Met	Pro	His	Thr	Glu	Ala	Arg	Ile	Met	Asn	Met	Glu	Ala	Gly					
				440					445					450					
Thr	Leu	Ala	Lys	Leu	Asn	Thr	Pro	Gly	Glu	Leu	Cys	Ile	Arg	Gly					
				455					460					465					
Tyr	Cys	Val	Met	Leu	Gly	Tyr	Trp	Gly	Glu	Pro	Gln	Lys	Thr	Glu					
				470					475					480					
Glu	Ala	Val	Asp	Gln	Asp	Lys	Trp	Tyr	Trp	Thr	Gly	Asp	Val	Ala					
				485					490					495					
Thr	Met	Asn	Glu	Gln	Gly	Phe	Cys	Lys	Ile	Val	Gly	Arg	Ser	Lys					
				500					505					510					
Asp	Met	Ile	Ile	Arg	Gly	Gly	Glu	Asn	Ile	Tyr	Pro	Ala	Glu	Leu					
				515					520					525					
Glu	Asp	Phe	Phe	His	Thr	His	Pro	Lys	Val	Gln	Glu	Val	Gln	Val					
				530					535					540					
Val	Gly	Val	Lys	Asp	Asp	Arg	Met	Gly	Glu	Glu	Ile	Cys	Ala	Cys					
				545					550					555					
Ile	Arg	Leu	Lys	Asp	Gly	Glu	Glu	Thr	Thr	Val	Glu	Glu	Ile	Lys					

560	565	570
Ala Phe Cys Lys Gly Lys Ile Ser His Phe Lys Ile Pro Lys Tyr		
575	580	585
Ile Val Phe Val Thr Asn Tyr Pro Leu Thr Ile Ser Gly Lys Ile		
590	595	600
Gln Lys Phe Lys Leu Arg Glu Gln Met Glu Arg His Leu Asn Leu		
605	610	615

<210> 195
 <211> 642
 <212> DNA
 <213> Homo sapiens

<400> 195
 caactccaac atttttaggag agcgccctgaa actgcatgag aagacaccag 50
 agcagttgcg gatgatcctg cccaaccccc tgtaccattg cctggggttcc 100
 gtggcaggca caatgatgtg tctgatgtac ggtgccaccc tcatcctggc 150
 ctctcccatc ttcaatggca agaaggcact ggaggccatc agcagagaga 200
 gaggcacctt cctgtatggt acccccacga tggtcgtgga cattctgaac 250
 cagccagact tctccagtta tgacatctcg accatgtgtg gaggtgtcat 300
 tgctgggtcc cctgcacctc cagagttgat ccgagccatc atcaacaaga 350
 taaatatgaa ggacctggtg gttgcttatg gaaccacaga gaacagtccc 400
 gtgacattcg cgcacttccc tgaggacact gtggagcaga aggcagaaag 450
 cgtgggcaga attatgcctc acacggaggc gcggtatcatg aacatggagg 500
 cagggacgct ggcaaagctg aacacgcccg gggagctgtg catccgaggg 550
 tactgctca tgctgggcta ctgggggtgag cctcagaaga cagaggaagc 600
 agtggatcag gacaagtggg attggacagg agatgtcgcc ac 642

<210> 196
 <211> 1575
 <212> DNA
 <213> Homo sapiens

<400> 196
 gagcaggacg gagccatgga ccccgccagg aaagcaggtg cccaggccat 50
 gatctggact gcaggctggc tgctgctgct gctgcttcgc ggaggagcgc 100
 aggccctgga gtgctacagc tgcgtgcaga aagcagatga cggatgctcc 150
 ccgaacaaga tgaagacagt gaagtgcgcg ccgggctgtg acgtctgcac 200
 cgaggccgtg ggggcggtg agaccatcca cggacaattc tcgctggcag 250
 tgccggggtg cggttcggga ctccccggca agaataaccg cggcctggat 300
 cttcacgggc ttctggcggt catccagctg cagcaatgcg ctcaggatcg 350

ctgcaacgcc aagctcaacc tcacctogcg ggcgctcgac ccggcaggta 400
atgagagtgc ataccgccc aacggcgtgg agtgctacag ctgtgtgggc 450
ctgagccggg aggcgtgcc gggtagatcg ccgccggtcg tgagctgcta 500
caacgccagc gatcatgtct acaagggctg cttcgacggc aacgtcacct 550
tgacggcagc taatgtgact gtgtccttgc ctgtccgggg ctgtgtccag 600
gatgaattct gactcggga tggagtaaca ggcccagggt tcacgctcag 650
tggctcctgt tgccaggggt cccgctgtaa ctctgacctc cgcaacaaga 700
cctacttctc ccctcgaatc ccaccccttg tccggctgcc ccctccagag 750
cccacgactg tggcctcaac cacatctgtc accacttcta cctcggcccc 800
agttagaccc acatccacca ccaaaccat gccagcgcca accagtcaga 850
ctccgagaca gggagtagaa cacgaggcct cccgggatga ggagcccagg 900
ttgactggag gcgccgctgg ccaccaggac cgcagcaatt cagggcagta 950
tcctgcaaaa ggggggcccc agcagcccca taataaaggc tgtgtggctc 1000
ccacagctgg attggcagcc cttctgttgg ccgtggctgc tgggtgtccta 1050
ctgtgagctt ctccacctgg aaatttccct ctcacctact tctctggccc 1100
tgggtacccc tcttctcctc acttctgtgt cccaccactg gactgggctg 1150
gccagcccc tgtttttcca acattcccca gtatccccag cttctgctgc 1200
gctggtttgc ggctttggga aataaaatac cgttgtatat attctgccag 1250
gggtgttcta gctttttgag gacagctcct gtatccttct catccttgtc 1300
tctccgcttg tcctcttgtg atgttaggac agagttagag aagtcagctg 1350
tcacggggaa ggtgagagag aggatgctaa gcttcctact cactttctcc 1400
tagccagcct ggactttgga gcgtgggggtg ggtgggacaa tggctcccca 1450
ctctaagcac tgcctcccct actccccgca tctttgggga atcggttccc 1500
catatgtctt ccttactaga ctgtgagctc ctcgaggggg ggcccggtag 1550
ccaattcgcc ctatagttag tcgta 1575

<210> 197

<211> 346

<212> PRT

<213> Homo sapiens

<400> 197

Met Asp Pro Ala Arg Lys Ala Gly Ala Gln Ala Met Ile Trp Thr
1 5 10 15

Ala Gly Trp Leu Leu Leu Leu Leu Arg Gly Gly Ala Gln Ala
20 25 30

Leu Glu Cys Tyr Ser Cys Val Gln Lys Ala Asp Asp Gly Cys Ser

	35	40	45
Pro Asn Lys Met	Lys Thr Val Lys Cys Ala	Pro Gly Val Asp Val	
	50	55	60
Cys Thr Glu Ala	Val Gly Ala Val Glu Thr	Ile His Gly Gln Phe	
	65	70	75
Ser Leu Ala Val	Arg Gly Cys Gly Ser	Gly Leu Pro Gly Lys Asn	
	80	85	90
Asp Arg Gly Leu	Asp Leu His Gly Leu	Leu Ala Phe Ile Gln Leu	
	95	100	105
Gln Gln Cys Ala	Gln Asp Arg Cys Asn	Ala Lys Leu Asn Leu Thr	
	110	115	120
Ser Arg Ala Leu	Asp Pro Ala Gly Asn	Glu Ser Ala Tyr Pro Pro	
	125	130	135
Asn Gly Val Glu	Cys Tyr Ser Cys Val	Gly Leu Ser Arg Glu Ala	
	140	145	150
Cys Gln Gly Thr	Ser Pro Pro Val Val	Ser Cys Tyr Asn Ala Ser	
	155	160	165
Asp His Val Tyr	Lys Gly Cys Phe Asp	Gly Asn Val Thr Leu Thr	
	170	175	180
Ala Ala Asn Val	Thr Val Ser Leu Pro	Val Arg Gly Cys Val Gln	
	185	190	195
Asp Glu Phe Cys	Thr Arg Asp Gly Val	Thr Gly Pro Gly Phe Thr	
	200	205	210
Leu Ser Gly Ser	Cys Cys Gln Gly Ser	Arg Cys Asn Ser Asp Leu	
	215	220	225
Arg Asn Lys Thr	Tyr Phe Ser Pro Arg	Ile Pro Pro Leu Val Arg	
	230	235	240
Leu Pro Pro Pro	Glu Pro Thr Thr Val	Ala Ser Thr Thr Ser Val	
	245	250	255
Thr Thr Ser Thr	Ser Ala Pro Val Arg	Pro Thr Ser Thr Thr Lys	
	260	265	270
Pro Met Pro Ala	Pro Thr Ser Gln Thr	Pro Arg Gln Gly Val Glu	
	275	280	285
His Glu Ala Ser	Arg Asp Glu Glu Pro	Arg Leu Thr Gly Gly Ala	
	290	295	300
Ala Gly His Gln	Asp Arg Ser Asn Ser	Gly Gln Tyr Pro Ala Lys	
	305	310	315
Gly Gly Pro Gln	Gln Pro His Asn Lys	Gly Cys Val Ala Pro Thr	
	320	325	330
Ala Gly Leu Ala	Ala Leu Leu Leu Ala	Val Ala Ala Gly Val Leu	
	335	340	345
Leu			

<210> 198
 <211> 1657
 <212> DNA
 <213> Homo sapiens

<400> 198
 cgggactcgg cgggtcctcc tgggagtctc ggaggggacc ggctgtgcag 50
 acgccatgga gttggtgctg gtcttcctct gcagcctgct ggcccccatg 100
 gtccctggcca gtgcagctga aaaggagaag gaaatggacc cttttcatta 150
 tgattaccag accctgagga ttgggggact ggtgttcgct gtggtcctct 200
 tctcggttgg gatcctcctt atcctaagtc gcagggtgcaa gtgcagtttc 250
 aatcagaagc cccgggcccc aggagatgag gaagcccagg tggagaacct 300
 catcacgcc aatgcaacag agccccagaa gcagagaact gaagtgcagc 350
 catcagggtg aagcctctgg aacctgaggc ggctgcttga acctttggat 400
 gcaaattgtc atgcttaaga aaaccggcca cttcagcaac agccctttcc 450
 ccaggagaag ccaagaactt gtgtgtcccc caccctatcc cctctaacac 500
 cattcctcca cctgatgatg caactaacac ttgcctcccc actgcagcct 550
 gcggtcctgc ccacctccc tgatgtgtgt gtgtgtgtgt gtgtgtgact 600
 gtgtgtgttt gctaactgtg gtctttgtgg ctacttgttt gtggatggta 650
 ttgtgtttgt tagtgaactg tggactcgct tcccaggca ggggctgagc 700
 cacatggcca tctgtcctc cctgcccccg tggccctoca tcaccttctg 750
 ctccataggag gctgcttggt gcccgagacc agccccctcc cctgatttag 800
 ggatgcgtag ggtaagagca cgggcagtgg tcttcagtcg tcttgggacc 850
 tgggaagggt tgcagcactt tgtcatcatt cttcatggac tcctttcact 900
 cctttaacaa aaaccttgct tccttatccc acctgatccc agtctgaagg 950
 tctcttagca actggagata caaagcaagg agctggtgag ccagcgttg 1000
 acgtcaggca ggctatgcc ttccgtggtt aatttcttcc caggggcttc 1050
 cacgaggagt ccccatctgc cccgcccctt cacagagcgc ccggggattc 1100
 caggcccagg gcttctactc tgcccctggg gaatgtgtcc cctgcatatc 1150
 ttctcagcaa taactccatg ggctctggga ccctaccct tccaaccttc 1200
 cctgcttctg agacttcaat ctacagccca gctcatccag atgcagacta 1250
 cagtccctgc aattgggtct ctggcaggca atagttgaag gactcctgtt 1300
 ccgttggggc cagcacaccg ggatggatgg agggagagca gaggcctttg 1350
 cttctctgcc tacgtcccct tagatgggca gcagaggcaa ctcccgcac 1400

Country	Year	Population (millions)	Urban population (millions)	Urban population (%)	Population density (per sq km)	Urban population density (per sq km)	Population growth rate (%)	Urban population growth rate (%)	Population growth rate (%)	Urban population growth rate (%)	Population growth rate (%)	Urban population growth rate (%)
Algeria	1980	10.0	4.0	40.0	100.0	250.0	1.5	2.5	1.5	2.5	1.5	2.5
Algeria	1985	10.5	4.5	42.9	105.0	262.5	1.8	3.0	1.8	3.0	1.8	3.0
Algeria	1990	11.0	5.0	45.5	110.0	275.0	2.0	3.5	2.0	3.5	2.0	3.5
Algeria	1995	11.5	5.5	47.8	115.0	287.5	2.2	4.0	2.2	4.0	2.2	4.0
Algeria	2000	12.0	6.0	50.0	120.0	300.0	2.5	4.5	2.5	4.5	2.5	4.5
Algeria	2005	12.5	6.5	52.0	125.0	312.5	2.8	5.0	2.8	5.0	2.8	5.0
Algeria	2010	13.0	7.0	53.8	130.0	325.0	3.0	5.5	3.0	5.5	3.0	5.5
Algeria	2015	13.5	7.5	55.6	135.0	337.5	3.2	6.0	3.2	6.0	3.2	6.0
Algeria	2020	14.0	8.0	57.1	140.0	350.0	3.5	6.5	3.5	6.5	3.5	6.5
Algeria	2025	14.5	8.5	58.6	145.0	362.5	3.8	7.0	3.8	7.0	3.8	7.0
Algeria	2030	15.0	9.0	60.0	150.0	375.0	4.0	7.5	4.0	7.5	4.0	7.5
Algeria	2035	15.5	9.5	61.3	155.0	387.5	4.2	8.0	4.2	8.0	4.2	8.0
Algeria	2040	16.0	10.0	62.5	160.0	400.0	4.5	8.5	4.5	8.5	4.5	8.5
Algeria	2045	16.5	10.5	63.6	165.0	412.5	4.8	9.0	4.8	9.0	4.8	9.0
Algeria	2050	17.0	11.0	64.7	170.0	425.0	5.0	9.5	5.0	9.5	5.0	9.5
Algeria	2055	17.5	11.5	65.7	175.0	437.5	5.2	10.0	5.2	10.0	5.2	10.0
Algeria	2060	18.0	12.0	66.7	180.0	450.0	5.5	10.5	5.5	10.5	5.5	10.5
Algeria	2065	18.5	12.5	67.6	185.0	462.5	5.8	11.0	5.8	11.0	5.8	11.0
Algeria	2070	19.0	13.0	68.4	190.0	475.0	6.0	11.5	6.0	11.5	6.0	11.5
Algeria	2075	19.5	13.5	69.2	195.0	487.5	6.2	12.0	6.2	12.0	6.2	12.0
Algeria	2080	20.0	14.0	70.0	200.0	500.0	6.5	12.5	6.5	12.5	6.5	12.5
Algeria	2085	20.5	14.5	70.7	205.0	512.5	6.8	13.0	6.8	13.0	6.8	13.0
Algeria	2090	21.0	15.0	71.4	210.0	525.0	7.0	13.5	7.0	13.5	7.0	13.5
Algeria	2095	21.5	15.5	72.1	215.0	537.5	7.2	14.0	7.2	14.0	7.2	14.0
Algeria	2100	22.0	16.0	72.7	220.0	550.0	7.5	14.5	7.5	14.5	7.5	14.5
Algeria	2105	22.5	16.5	73.3	225.0	562.5	7.8	15.0	7.8	15.0	7.8	15.0
Algeria	2110	23.0	17.0	73.9	230.0	575.0	8.0	15.5	8.0	15.5	8.0	15.5
Algeria	2115	23.5	17.5	74.5	235.0	587.5	8.2	16.0	8.2	16.0	8.2	16.0
Algeria	2120	24.0	18.0	75.0	240.0	600.0	8.5	16.5	8.5	16.5	8.5	16.5
Algeria	2125	24.5	18.5	75.5	245.0	612.5	8.8					

```
<400> 202
cagttctgaa atcaatggag ttaatttagg gaatacaaac cagccatggg 50
ggaggagatt gcctttgcct cagtgttctt cacctgcctc tcccttctgg 100
cagcaggagt ctcccagggt gttcttctcc agccagttcc aactcaggag 150
acagggtccca aggccatggg agatctctcc tgtggctttg cgggccactc 200
atgagagtgt ttttgtgtaa agtatttttt agaatactgt tgacttcttc 250
atgatttaat aaccatcctt tgcgaagttt tatgaggctt taggggaatg 300
tcaaccctca aatttttggt atactagatg gcttccattt acccaccact 350
attttaaggt ccttttattt ttaggttcaa ggttcatttg acttgagaaa 400
gtgcccttct gcagcttcat tgattttggt tatcttcact attaattgta 450
acgattaaaa aagaataaga gcacgcagac ctctaggaga atattttatc 500
cctgggtgcc cctgacacat ttatgtagtg atcccacaaa tgtgattggt 550
aatttaaagt ttattctaatt attagtagat tcagttgtga tgtaatatga 600
ataaccagaa tctatttctt aaaagttttg agtatatttt tcaactagat 650
atttgtatat aaagactgaa tagtgatg 678
```

<210> 203
 <211> 52
 <212> PRT
 <213> Homo sapiens

<400> 203
 Met Gly Val Glu Ile Ala Phe Ala Ser Val Ile Leu Thr Cys Leu
 1 5 10 15
 Ser Leu Leu Ala Ala Gly Val Ser Gln Val Val Leu Leu Gln Pro
 20 25 30
 Val Pro Thr Gln Glu Thr Gly Pro Lys Ala Met Gly Asp Leu Ser
 35 40 45
 Cys Gly Phe Ala Gly His Ser
 50

<210> 204
 <211> 1917
 <212> DNA
 <213> Homo sapiens

<400> 204
 ggggaatctg cagtaggtct gccggcgatg gagtgggtggg ctagctcgcc 50
 gcttcggctc tggctgctgt tgttcctcct gccctcagcg cagggccgccc 100
 agaaggagtc aggttcaaaa tggaaagtat ttattgacca aattaacagg 150
 tctttggaga attacgaacc atgttcaagt caaaactgca gctgctacca 200
 tgggtgtcata gaagaggatc taactccttt ccgaggaggc atctccagga 250
 agatgatggc agaggtagtc agacggaagc tagggaccca ctatcagatc 300
 actaagaaca gactgtaccg ggaaaatgac tgcattgttc cctcaagggtg 350
 tagtgggtgt gagcacttta ttttggaagt gatcggggcg ctccctgaca 400
 tggagatggg gatcaatgta cgagattatc ctcagggttc taaatggatg 450
 gagcctgcca tcccagtctt ctccctcagt aagacatcag agtaccatga 500
 tatcatgtat cctgcttggg cattttggga agggggacct gctgtttggc 550
 caatttatcc tacagggtct ggacgggtggg acctcttcag agaagatctg 600
 gtaagggtcag cagcacagtg gccatggaaa aagaaaaact ctacagcata 650
 tttccgagga tcaaggacaa gtccagaacg agatcctctc attcttctgt 700
 ctcggaaaaa cccaaaactt gttgatgcag aatacaccaa aaaccaggcc 750
 tggaaatcta tgaaagatac cttaggaaag ccagctgcta aggatgtcca 800
 tcttgtggat cactgcaaat acaagtatct gtttaatttt cgaggcgtag 850
 ctgcaagttt ccggtttaaa cacctcttcc tgtgtggctc acttgttttc 900
 catgttggtg atgagtggct agaattcttc tatccacagc tgaagccatg 950
 ggttcactat atcccagtca aaacagatct ctccaatgtc caagagctgt 1000

tacaatttgt aaaagcaaat gatgatgtag ctcaagagat tgctgaaagg 1050
 ggaagccagt ttattaggaa ccatttgcag atggatgaca tcacctgtta 1100
 ctgggagaac ctcttgagtg aataactctaa attcctgtct tataatgtaa 1150
 cgagaaggaa aggttatgat caaattattc ccaaaatggt gaaaactgaa 1200
 ctatagtagt catcatagga ccatagtcct ctttgtggca acagatctca 1250
 gatatcctac ggtgagaagc ttaccataag cttgggtcct ataccttgaa 1300
 tatctgctat caagccaaat acctgggttt ccttatcatg ctgcacccag 1350
 agcaactctt gagaaagatt taaaatgtgt ctaatacact gatatgaagc 1400
 agttcaactt tttggatgaa taaggaccag aaatcgtgag atgtggattt 1450
 tgaacccaac tctacctttc attttcttaa gaccaatcac agcttgtgcc 1500
 tcagatcatc cacctgtgtg agtccatcac tgtgaaattg actgtgtcca 1550
 tgtgatgatg ccctttgtcc cattatttgg agcagaaaat tcgtcatttg 1600
 gaagtagtac aactcattgc tggaattgtg aaattattca aggcgtgatc 1650
 tctgtcactt tattttaatg taggaaaccc tatgggggtt atgaaaaata 1700
 cttgggggatc attctctgaa tgggtctaagg aagcggtagc catgccatgc 1750
 aatgatgtag gagttctctt ttgtaaaacc ataaactctg ttactcagga 1800
 ggtttctata atgccacata gaaagaggcc aattgcatga gtaattattg 1850
 caattggatt tcaggttccc tttttgtgcc ttcatgccct acttcttaat 1900
 gcctctctaa agccaaa 1917

<210> 205
 <211> 392
 <212> PRT
 <213> Homo sapiens

<400> 205
 Met Glu Trp Trp Ala Ser Ser Pro Leu Arg Leu Trp Leu Leu Leu
 1 5 10 15
 Phe Leu Leu Pro Ser Ala Gln Gly Arg Gln Lys Glu Ser Gly Ser
 20 25 30
 Lys Trp Lys Val Phe Ile Asp Gln Ile Asn Arg Ser Leu Glu Asn
 35 40 45
 Tyr Glu Pro Cys Ser Ser Gln Asn Cys Ser Cys Tyr His Gly Val
 50 55 60
 Ile Glu Glu Asp Leu Thr Pro Phe Arg Gly Gly Ile Ser Arg Lys
 65 70 75
 Met Met Ala Glu Val Val Arg Arg Lys Leu Gly Thr His Tyr Gln
 80 85 90
 Ile Thr Lys Asn Arg Leu Tyr Arg Glu Asn Asp Cys Met Phe Pro

090973.11001
FOO2T"EE268660

	95	100	105
Ser Arg Cys Ser	Gly Val Glu His Phe	Ile Leu Glu Val Ile	Gly
	110	115	120
Arg Leu Pro Asp	Met Glu Met Val Ile	Asn Val Arg Asp Tyr	Pro
	125	130	135
Gln Val Pro Lys	Trp Met Glu Pro Ala	Ile Pro Val Phe Ser	Phe
	140	145	150
Ser Lys Thr Ser	Glu Tyr His Asp Ile	Met Tyr Pro Ala Trp	Thr
	155	160	165
Phe Trp Glu Gly	Gly Pro Ala Val Trp	Pro Ile Tyr Pro Thr	Gly
	170	175	180
Leu Gly Arg Trp	Asp Leu Phe Arg Glu	Asp Leu Val Arg Ser	Ala
	185	190	195
Ala Gln Trp Pro	Trp Lys Lys Lys Asn	Ser Thr Ala Tyr Phe	Arg
	200	205	210
Gly Ser Arg Thr	Ser Pro Glu Arg Asp	Pro Leu Ile Leu Leu	Ser
	215	220	225
Arg Lys Asn Pro	Lys Leu Val Asp Ala	Glu Tyr Thr Lys Asn	Gln
	230	235	240
Ala Trp Lys Ser	Met Lys Asp Thr Leu	Gly Lys Pro Ala Ala	Lys
	245	250	255
Asp Val His Leu	Val Asp His Cys Lys	Tyr Lys Tyr Leu Phe	Asn
	260	265	270
Phe Arg Gly Val	Ala Ala Ser Phe Arg	Phe Lys His Leu Phe	Leu
	275	280	285
Cys Gly Ser Leu	Val Phe His Val Gly	Asp Glu Trp Leu Glu	Phe
	290	295	300
Phe Tyr Pro Gln	Leu Lys Pro Trp Val	His Tyr Ile Pro Val	Lys
	305	310	315
Thr' Asp Leu Ser	Asn Val Gln Glu Leu	Leu Gln Phe Val Lys	Ala
	320	325	330
Asn Asp Asp Val	Ala Gln Glu Ile Ala	Glu Arg Gly Ser Gln	Phe
	335	340	345
Ile Arg Asn His	Leu Gln Met Asp Asp	Ile Thr Cys Tyr Trp	Glu
	350	355	360
Asn Leu Leu Ser	Glu Tyr Ser Lys Phe	Leu Ser Tyr Asn Val	Thr
	365	370	375
Arg Arg Lys Gly	Tyr Asp Gln Ile Ile	Pro Lys Met Leu Lys	Thr
	380	385	390
Glu Leu			

<210> 206

<211> 1425
<212> DNA
<213> Homo sapiens

<400> 206

caccctcca tttctcgcca tggccctgc actgctcctg atccctgctg 50
ccctcgctc tttcatcctg gcctttggca cggagtgga gttcgtgcgc 100
tttacctcc ttcgccact tcttgaggg atcccgagt ctggtggtcc 150
ggatgccgc cagggatggc tggctgccct gcaggaccgc agcatccttg 200
ccccctggc atgggatctg gggctcctgc ttctatttgt tgggcagcac 250
agcctcatgg cagctgaaag agtgaaggca tggacatccc ggtactttgg 300
ggtccttcag aggtcactgt atgtggcctg cactgccctg gccttgacgc 350
tggtgatgag gtactgggag ccataccca aaggccctgt gttgtgggag 400
gctcgggctg agccatgggc cacctgggtg ccgctcctct gctttgtgct 450
ccatgtcatc tcctggctcc tcacttttag catccttctc gtctttgact 500
atgctgagct catgggcctc aaacaggtat actaccatgt gctggggctg 550
ggcagcctc tggccctgaa gtctccccgg gctctcagac tcttctccca 600
cctgcgccac ccagtgtgtg tggagctgct gacagtgtg tgggtggtgc 650
ctacctggg cacggaccgt ctctccttg ctttctcct taccctctac 700
ctgggcctgg ctacgggct tgatcagcaa gacctccgct acctccgggc 750
ccagctacaa agaaaactcc acctgctctc tgggcccag gatggggagg 800
cagagtgagg agctcactct gggtacaagc cctgttcttc ctctccact 850
gaattctaaa tccttaacat ccaggccctg gctgcttcat gccagaggcc 900
caaatccatg gactgaagga gatgccctt ctactacttg agactttatt 950
ctctgggtcc agctccatac cctaaattct gagtttcagc cactgaactc 1000
caagggtccac ttctcaccag caaggaagag tggggtatgg aagtcactctg 1050
tcccttcact gtttagagca tgacactctc cccctcaaca gcctcctgag 1100
aaggaaagga tctgccctga ccactccctt ggcactgtta cttgcctctg 1150
cgctcaggg gtcccttctt gcaccgctgg cttccactcc aagaagggtg 1200
accagggtct gcaagttcaa cggtcatagc tgtccctcca ggccccaacc 1250
ttgcctcacc actcccgcc ctagtctctg cacctcctta ggccctgcct 1300
ctgggctcag accccaacct agtcaagggg attctcctgc tcttaactcg 1350
atgacttggg gtcctctgct ctcccgagga agatgctctg caggaaaata 1400
aaagtcagcc tttttctaaa aaaa 1425

<210> 207
 <211> 262
 <212> PRT
 <213> Homo sapiens

<400> 207

Met	Ala	Pro	Ala	Leu	Leu	Leu	Ile	Pro	Ala	Ala	Leu	Ala	Ser	Phe
1				5					10					15
Ile	Leu	Ala	Phe	Gly	Thr	Gly	Val	Glu	Phe	Val	Arg	Phe	Thr	Ser
				20					25					30
Leu	Arg	Pro	Leu	Leu	Gly	Gly	Ile	Pro	Glu	Ser	Gly	Gly	Pro	Asp
				35					40					45
Ala	Arg	Gln	Gly	Trp	Leu	Ala	Ala	Leu	Gln	Asp	Arg	Ser	Ile	Leu
				50					55					60
Ala	Pro	Leu	Ala	Trp	Asp	Leu	Gly	Leu	Leu	Leu	Leu	Phe	Val	Gly
				65					70					75
Gln	His	Ser	Leu	Met	Ala	Ala	Glu	Arg	Val	Lys	Ala	Trp	Thr	Ser
				80					85					90
Arg	Tyr	Phe	Gly	Val	Leu	Gln	Arg	Ser	Leu	Tyr	Val	Ala	Cys	Thr
				95					100					105
Ala	Leu	Ala	Leu	Gln	Leu	Val	Met	Arg	Tyr	Trp	Glu	Pro	Ile	Pro
				110					115					120
Lys	Gly	Pro	Val	Leu	Trp	Glu	Ala	Arg	Ala	Glu	Pro	Trp	Ala	Thr
				125					130					135
Trp	Val	Pro	Leu	Leu	Cys	Phe	Val	Leu	His	Val	Ile	Ser	Trp	Leu
				140					145					150
Leu	Ile	Phe	Ser	Ile	Leu	Leu	Val	Phe	Asp	Tyr	Ala	Glu	Leu	Met
				155					160					165
Gly	Leu	Lys	Gln	Val	Tyr	Tyr	His	Val	Leu	Gly	Leu	Gly	Glu	Pro
				170					175					180
Leu	Ala	Leu	Lys	Ser	Pro	Arg	Ala	Leu	Arg	Leu	Phe	Ser	His	Leu
				185					190					195
Arg	His	Pro	Val	Cys	Val	Glu	Leu	Leu	Thr	Val	Leu	Trp	Val	Val
				200					205					210
Pro	Thr	Leu	Gly	Thr	Asp	Arg	Leu	Leu	Leu	Ala	Phe	Leu	Leu	Thr
				215					220					225
Leu	Tyr	Leu	Gly	Leu	Ala	His	Gly	Leu	Asp	Gln	Gln	Asp	Leu	Arg
				230					235					240
Tyr	Leu	Arg	Ala	Gln	Leu	Gln	Arg	Lys	Leu	His	Leu	Leu	Ser	Arg
				245					250					255
Pro	Gln	Asp	Gly	Glu	Ala	Glu								
				260										

<210> 208
 <211> 2095
 <212> DNA

<213> Homo sapiens

<400> 208

ccgagcacag gagattgcct gcgttttagga ggtggctgcg ttgtgggaaa 50
agctatcaag gaagaaattg ccaaaccatg tctttttttc tgttttcaga 100
gtagttcaca acagatctga gtgttttaat taagcatgga atacagaaaa 150
caacaaaaaa cttaagcttt aatttcatct ggaattccac agttttctta 200
gctccctgga cccggttgac ctgttggtc ttcccgtgg ctgctctatc 250
acgtggtgct ctccgactac tcaccccgag tgtaaagaac cttcggctcg 300
cgtgcttctg agctgctgtg gatggcctcg gctctctgga ctgtccttcc 350
gagtaggatg tcaactgagat ccctcaaagt gagcctcctg ctgctgtcac 400
tcctgagttt ctttgtgatg tggtagctca gccttcccca ctacaatgtg 450
atagaacgcg tgaactggat gtacttctat gagtatgagc cgatttacag 500
acaagacttt cacttcacac ttcgagagca ttcaaactgc tctcatcaaa 550
atccatttct ggtcattctg gtgacctccc acccttcaga tgtgaaagcc 600
aggcaggcca ttagagttac ttggggtgaa aaaaagtctt ggtggggata 650
tgaggttctt acatttttct tattaggcca agaggctgaa aaggaagaca 700
aaatgttggc attgtcctta gaggatgaac accttcttta tggtagacata 750
atccgacaag attttttaga cacatataat aacctgacct tgaaaacccat 800
tatggcattc aggtgggtaa ctgagttttg cccaatgcc aagtaagtaa 850
tgaagacaga cactgatgtt ttcacataata ctggcaattt agtgaagtat 900
cttttaaacc taaaccactc agagaagttt ttcacagggt atcctctaata 950
tgataattat tcctatagag gattttacca aaaaacccat atttcttacc 1000
aggagtatcc tttcaagggt ttccctccat actgcagtgg gttgggttat 1050
ataatgtcca gagatttggg gccaaaggatc tatgaaatga tgggtcacgt 1100
aaaacccatc aagtttgaag atgtttatgt cgggatctgt ttgaatttat 1150
taaaagtga cttcatatt ccagaagaca caaatctttt ctttctatat 1200
agaatccatt tggatgtctg tcaactgaga cgtgtgattg cagcccatgg 1250
cttttcttcc aaggagatca tcactttttg gcaggtcatg ctaaggaaca 1300
ccacatgcca ttattaactt cacattctac aaaaagccta gaaggacagg 1350
ataccttgtg gaaagtgtta aataaagtag gtactgtgga aaattcatgg 1400
ggaggtcagt gtgctggctt aactgaact gaaactcatg aaaaaccag 1450
actggagact ggagggttac acttgtgatt tattagtcag gcccttcaaa 1500

gatgatatgt ggaggaatta aatataaagg aattggaggt ttttgctaaa 1550
gaaattaata ggaccaaaca atttggacat gtcattctgt agactagaat 1600
ttcttaaaaag ggtgttactg agttataagc tcactaggct gtaaaaacaa 1650
aacaatgtag agttttatatt attgaacaat gtagtcactt gaaggttttg 1700
tgtatatctt atgtggatta ccaatttaaa aatatatgta gttctgtgtc 1750
aaaaaacttc ttactgaag ttatactgaa caaaatttta cctgtttttg 1800
gtcattttata aagtacttca agatgttgca gtatttcaca gttattatta 1850
tttaaaatta cttcaacttt gtgtttttta atgttttgac gatttcaata 1900
caagataaaa aggatagtga atcattcttt acatgcaaac attttccagt 1950
tacttaactg atcagtttat tattgatata tcactccatt aatgtaaagt 2000
catagggtcat tattgcatat cagtaatctc ttggactttg ttaaataattt 2050
tactgtggta atatagagaa gaattaaagc aagaaaatct gaaaa 2095

<210> 209
<211> 331
<212> PRT
<213> Homo sapiens

<400> 209
Met Ala Ser Ala Leu Trp Thr Val Leu Pro Ser Arg Met Ser Leu
1 5 10 15
Arg Ser Leu Lys Trp Ser Leu Leu Leu Leu Ser Leu Leu Ser Phe
20 25 30
Phe Val Met Trp Tyr Leu Ser Leu Pro His Tyr Asn Val Ile Glu
35 40 45
Arg Val Asn Trp Met Tyr Phe Tyr Glu Tyr Glu Pro Ile Tyr Arg
50 55 60
Gln Asp Phe His Phe Thr Leu Arg Glu His Ser Asn Cys Ser His
65 70 75
Gln Asn Pro Phe Leu Val Ile Leu Val Thr Ser His Pro Ser Asp
80 85 90
Val Lys Ala Arg Gln Ala Ile Arg Val Thr Trp Gly Glu Lys Lys
95 100 105
Ser Trp Trp Gly Tyr Glu Val Leu Thr Phe Phe Leu Leu Gly Gln
110 115 120
Glu Ala Glu Lys Glu Asp Lys Met Leu Ala Leu Ser Leu Glu Asp
125 130 135
Glu His Leu Leu Tyr Gly Asp Ile Ile Arg Gln Asp Phe Leu Asp
140 145 150
Thr Tyr Asn Asn Leu Thr Leu Lys Thr Ile Met Ala Phe Arg Trp
155 160 165

ggacatttcc ttctgtggag acacggtgga gaactaaaca attttttaaa 600
gccactatgg atttagtcat ctgaatatgc tgtgcagaaa aaatatgggc 650
tccagtgggtt ttaccatgt cattctgaaa tttttctcta ctagttatgt 700
ttgatttctt taagtttcaa taaaatcatt tagcattgaa aaaaa 745

<210> 211
<211> 185
<212> PRT
<213> Homo sapiens

<400> 211
Met Lys Phe Thr Ile Val Phe Ala Gly Leu Leu Gly Val Phe Leu
1 5 10 15
Ala Pro Ala Leu Ala Asn Tyr Asn Ile Asn Val Asn Asp Asp Asn
20 25 30
Asn Asn Ala Gly Ser Gly Gln Gln Ser Val Ser Val Asn Asn Glu
35 40 45
His Asn Val Ala Asn Val Asp Asn Asn Asn Gly Trp Asp Ser Trp
50 55 60
Asn Ser Ile Trp Asp Tyr Gly Asn Gly Phe Ala Ala Thr Arg Leu
65 70 75
Phe Gln Lys Lys Thr Cys Ile Val His Lys Met Asn Lys Glu Val
80 85 90
Met Pro Ser Ile Gln Ser Leu Asp Ala Leu Val Lys Glu Lys Lys
95 100 105
Leu Gln Gly Lys Gly Pro Gly Gly Pro Pro Pro Lys Gly Leu Met
110 115 120
Tyr Ser Val Asn Pro Asn Lys Val Asp Asp Leu Ser Lys Phe Gly
125 130 135
Lys Asn Ile Ala Asn Met Cys Arg Gly Ile Pro Thr Tyr Met Ala
140 145 150
Glu Glu Met Gln Glu Ala Ser Leu Phe Phe Tyr Ser Gly Thr Cys
155 160 165
Tyr Thr Thr Ser Val Leu Trp Ile Val Asp Ile Ser Phe Cys Gly
170 175 180
Asp Thr Val Glu Asn
185

<210> 212
<211> 1706
<212> DNA
<213> Homo sapiens

<400> 212
catttctgaa actaatcgtg tcagaattga ctttgaaaag cattgctttt 50
tacagaagta tattaacttt ttaggagtaa tttctagttt ggattgtaat 100

atgaaataat ttaaaagggc ttcgctcata tataggaaaa togcatatgg 150
 tcctagtatt aaattcttat tgcttactga tttttttgag ttaagagttg 200
 ttatatgcta gaatatgagg atgtgaatat aaataagaga agaaaaaaga 250
 ataaagtaga ttgagtctcc aatttttatgt aagcttcaga agaactgggtt 300
 tgtttacatg caagcttata gttgaaatat ttttcaggaa ttacatgaat 350
 gacagtcttc gaaccaatgt gtttgttcga tttcaaccag agactatagc 400
 atgtgcttgc atctaccttg cagctagagc acttcagatt ccgttgccaa 450
 ctcgccccca ttggtttctt ctttttggtg ctacagaaga ggaaatccag 500
 gaaatctgca tagaaacact taggctttat accagaaaaa agccaaacta 550
 tgaattactg gaaaaagaag tagaaaaaag aaaagtagcc ttacaagaag 600
 ccaaattaaa agcaaagga ttgaatccgg atggaactcc agccctttca 650
 accctgggtg gattttctcc agcctccaag ccacatcac caagagaagt 700
 aaaagctgaa gagaaatcac caatctccat taatgtgaag acagtcaaaa 750
 aagaacctga ggatagacaa caggcttcca aaagccctta caatggtgta 800
 agaaaagaca gcaagagaag tagaaatagc agaagtgcaa gtcgatcgag 850
 gtcaagaaca cgatcacgtt ctatagcaca tactccaaga agacactata 900
 ataataggcg gagtcgatct ggaacatata gtcgagatc aagaagcagg 950
 tcccgcagtc acagtgaag ccctcgaaga catcataatc atggttctcc 1000
 tcaccttaag gccaaagcata ccagagatga tttaaaaagt tcaaacagac 1050
 atggtcataa aaggaaaaaa tctcgttctc gatctcagag caagtctcgg 1100
 gatcactcag atgcagccaa gaaacacagg catgaaaggg gacatcatag 1150
 ggacaggcgt gaacgatctc gtccttttga gaggtcccat aaaagcaagc 1200
 accatggtgg cagtcgctca ggacatggca ggcacaggcg ctgactttct 1250
 cttcctttga gcctgcatca gttcttggtt ttgootatct acagtgtgat 1300
 gtatggactc aatcaaaaac attaaacgca aactgattag gatttgattt 1350
 cttgaaacct tctaggtctc tagaactg aggcagttt cttttgaaaa 1400
 gaactatggt aatttttttg cacattaaaa tgcoctagca gtatctaatt 1450
 aaaaacctg gtcaggttca attgtacttt attatagttg tgtattgttt 1500
 attgctataa gaactggagc gtgaattctg taaaaatgta tcttattttt 1550
 atacagataa aattgcagac actgttctat ttaagtgggtt atttgtttaa 1600
 atgatggtga atactttctt aacactgggtt tgtctgcatg tgtaaagatt 1650
 tttacaagga aataaaatac aaatcttggt ttttctaaaa aaaaaaaaaa 1700

[illegible]

<400>	213														
Met	Asn	Asp	Ser	Leu	Arg	Thr	Asn	Val	Phe	Val	Arg	Phe	Gln	Pro	
1				5					10					15	
Glu	Thr	Ile	Ala	Cys	Ala	Cys	Ile	Tyr	Leu	Ala	Ala	Arg	Ala	Leu	
				20					25					30	
Gln	Ile	Pro	Leu	Pro	Thr	Arg	Pro	His	Trp	Phe	Leu	Leu	Phe	Gly	
				35					40					45	
Thr	Thr	Glu	Glu	Glu	Ile	Gln	Glu	Ile	Cys	Ile	Glu	Thr	Leu	Arg	
				50					55					60	
Leu	Tyr	Thr	Arg	Lys	Lys	Pro	Asn	Tyr	Glu	Leu	Leu	Glu	Lys	Glu	
				65					70					75	
Val	Glu	Lys	Arg	Lys	Val	Ala	Leu	Gln	Glu	Ala	Lys	Leu	Lys	Ala	
				80					85					90	
Lys	Gly	Leu	Asn	Pro	Asp	Gly	Thr	Pro	Ala	Leu	Ser	Thr	Leu	Gly	
				95					100					105	
Gly	Phe	Ser	Pro	Ala	Ser	Lys	Pro	Ser	Ser	Pro	Arg	Glu	Val	Lys	
				110					115					120	
Ala	Glu	Glu	Lys	Ser	Pro	Ile	Ser	Ile	Asn	Val	Lys	Thr	Val	Lys	
				125					130					135	
Lys	Glu	Pro	Glu	Asp	Arg	Gln	Gln	Ala	Ser	Lys	Ser	Pro	Tyr	Asn	
				140					145					150	
Gly	Val	Arg	Lys	Asp	Ser	Lys	Arg	Ser	Arg	Asn	Ser	Arg	Ser	Ala	
				155					160					165	
Ser	Arg	Ser	Arg	Ser	Arg	Thr	Arg	Ser	Arg	Ser	Arg	Ser	His	Thr	
				170					175					180	
Pro	Arg	Arg	His	Tyr	Asn	Asn	Arg	Arg	Ser	Arg	Ser	Gly	Thr	Tyr	
				185					190					195	
Ser	Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Ser	His	Ser	Glu	Ser	Pro	
				200					205					210	
Arg	Arg	His	His	Asn	His	Gly	Ser	Pro	His	Leu	Lys	Ala	Lys	His	
				215					220					225	
Thr	Arg	Asp	Asp	Leu	Lys	Ser	Ser	Asn	Arg	His	Gly	His	Lys	Arg	
				230					235					240	
Lys	Lys	Ser	Arg	Ser	Arg	Ser	Gln	Ser	Lys	Ser	Arg	Asp	His	Ser	
				245					250					255	
Asp	Ala	Ala	Lys	Lys	His	Arg	His	Glu	Arg	Gly	His	His	Arg	Asp	
				260					265					270	
Arg	Arg	Glu	Arg	Ser	Arg	Ser	Phe	Glu	Arg	Ser	His	Lys	Ser	Lys	

ttccagctgg agacctgccc cctcaogacc gtggatgccc tggtcctgcg 350
 cttcttcctg gagtaccagt ggtttgtgga ctttgctgtg tactcgggcg 400
 gcgtgtacct cttcacagag gcctaactact acatgctggg accagccaag 450
 gagactaaca ttgctgtggt ctgggtgcctg ctcacgggtga ctttctccat 500
 caagatgttc ctgacagtga cacggctgta cttcagcgcc gaggaggggg 550
 gtgagcgctc tgtctgcctc acctttgcct tcctcttcct gctgctggcc 600
 atgctggtgc aagtgggtgc ggaggagacc ctcgagctgg gcctggagcc 650
 tggctctggcc agcatgaccc agaacttaga gccacttctg aagaagcagg 700
 gctgggactg ggcgcttcct gtggccaagc tggctatccg cgtgggactg 750
 gcagtgggtg gctctgtgct ggggtgccttc ctcaccttcc caggcctgcg 800
 gctggcccag acccaccggg acgcactgac catgtcggag gacagacca 850
 tgctgcagtt cctcctgcac accagcttcc tgtctcccct gttcatcctg 900
 tggctctgga caaagcccat tgcacgggac ttctgcacc agccgccgtt 950
 tggggagacg cgtttctccc tgetgtccga ttctgccttc gactctgggc 1000
 gcctctgggt gctgggtggtg ctgtgcctgc tgcggctggc ggtgaccgg 1050
 cccacctgc aggcctacct gtgcctggcc aaggcccggg tggagcagct 1100
 gcgaagggag gctggccgca tcgaagcccg tgaaatccag cagagggtgg 1150
 tccgagtcta ctgctatgtg accgtggtga gcttgacagta cctgacgccg 1200
 ctcatcctca cctcaactg cacacttctg ctcaagacgc tgggaggcta 1250
 ttcttggggc ctgggcccag ctctctact atccccgac ccatcctcag 1300
 ccagcgtgc ccccatcggc totggggagg acgaagtcca gcagactgca 1350
 gcgcggattg cgggggcoct ggggtggcctg cttactcccc tcttcctccg 1400
 tggcgtcctg gcctacctca tctggtggac ggctgcctgc cagctgctcg 1450
 ccagcctttt cggcctctac ttccaccagc acttggcagg ctctagctg 1500
 cctgcagacc ctcttggggc cctgaggtct gttcctgggg cagcgggaca 1550
 ctagcctgcc cctctgtttt ggcggccgt gtccccagct gcaaggtggg 1600
 gccggactcc cggcggttcc cttcaccaca gtgcctgacc cgcggccccc 1650
 cttggacgcc gagtttctgc ctcagaactg tctctcctgg gccagcagc 1700
 atgaggggtc cgaggccatt gtctccgaag cgtatgtgcc aggtttgagt 1750
 ggcgagggtg atgctggctg ctcttctgaa caaataaagg agcatgccga 1800
 tttttaa 1807

<210> 216

<211> 479
 <212> PRT
 <213> Homo sapiens

<400> 216

Met	Ala	Val	Leu	Gly	Val	Gln	Leu	Val	Val	Thr	Leu	Leu	Thr	Ala	1	5	10	15
Thr	Leu	Met	His	Arg	Leu	Ala	Pro	His	Cys	Ser	Phe	Ala	Arg	Trp	20	25	30	
Leu	Leu	Cys	Asn	Gly	Ser	Leu	Phe	Arg	Tyr	Lys	His	Pro	Ser	Glu	35	40	45	
Glu	Glu	Leu	Arg	Ala	Leu	Ala	Gly	Lys	Pro	Arg	Pro	Arg	Gly	Arg	50	55	60	
Lys	Glu	Arg	Trp	Ala	Asn	Gly	Leu	Ser	Glu	Glu	Lys	Pro	Leu	Ser	65	70	75	
Val	Pro	Arg	Asp	Ala	Pro	Phe	Gln	Leu	Glu	Thr	Cys	Pro	Leu	Thr	80	85	90	
Thr	Val	Asp	Ala	Leu	Val	Leu	Arg	Phe	Phe	Leu	Glu	Tyr	Gln	Trp	95	100	105	
Phe	Val	Asp	Phe	Ala	Val	Tyr	Ser	Gly	Gly	Val	Tyr	Leu	Phe	Thr	110	115	120	
Glu	Ala	Tyr	Tyr	Tyr	Met	Leu	Gly	Pro	Ala	Lys	Glu	Thr	Asn	Ile	125	130	135	
Ala	Val	Phe	Trp	Cys	Leu	Leu	Thr	Val	Thr	Phe	Ser	Ile	Lys	Met	140	145	150	
Phe	Leu	Thr	Val	Thr	Arg	Leu	Tyr	Phe	Ser	Ala	Glu	Glu	Gly	Gly	155	160	165	
Glu	Arg	Ser	Val	Cys	Leu	Thr	Phe	Ala	Phe	Leu	Phe	Leu	Leu	Leu	170	175	180	
Ala	Met	Leu	Val	Gln	Val	Val	Arg	Glu	Glu	Thr	Leu	Glu	Leu	Gly	185	190	195	
Leu	Glu	Pro	Gly	Leu	Ala	Ser	Met	Thr	Gln	Asn	Leu	Glu	Pro	Leu	200	205	210	
Leu	Lys	Lys	Gln	Gly	Trp	Asp	Trp	Ala	Leu	Pro	Val	Ala	Lys	Leu	215	220	225	
Ala	Ile	Arg	Val	Gly	Leu	Ala	Val	Val	Gly	Ser	Val	Leu	Gly	Ala	230	235	240	
Phe	Leu	Thr	Phe	Pro	Gly	Leu	Arg	Leu	Ala	Gln	Thr	His	Arg	Asp	245	250	255	
Ala	Leu	Thr	Met	Ser	Glu	Asp	Arg	Pro	Met	Leu	Gln	Phe	Leu	Leu	260	265	270	
His	Thr	Ser	Phe	Leu	Ser	Pro	Leu	Phe	Ile	Leu	Trp	Leu	Trp	Thr	275	280	285	
Lys	Pro	Ile	Ala	Arg	Asp	Phe	Leu	His	Gln	Pro	Pro	Phe	Gly	Glu				

actcgggcg cgtgtacctc ttcacagagg cctactacta catgctggga 400
ccagccaagg agactaacat tgctgtgttc tggcgcctgc tcacagtgc 450
cttctccatc aagatgttcc tgacagtgc acggctgtac ttcagcgccg 500
aggagggggg tgagcgctct gtctgcctca cctttgcctt cctcttcctg 550
ctgctggcca tgctgggtgca agcg 574

<210> 218
<211> 2571
<212> DNA
<213> Homo sapiens

<400> 218
ggttcctaca tcctctcatc tgagaatcag agagcataat cttcttacgg 50
gcccgtgatt tattaacgtg gcttaatctg aaggtttctca gtcaaattct 100
ttgtgatcta ctgattgtgg gggcatggca aggtttgctt aaaggagctt 150
ggctggtttg ggcccttgta gctgacagaa ggtggccagg gagaatgcag 200
cacactgctc ggagaatgaa ggcgcttctg ttgctgggtct tgccttggtc 250
cagtcctgct aactacattg acaatgtggg caacctgcac ttcctgtatt 300
cagaactctg taaagggtgcc tcccactacg gcctgaccaa agataggaag 350
aggcgctcac aagatggctg tcacagcggc tgtgcgagcc tcacagccac 400
ggctccctcc ccagagggtt ctgcagctgc caccatctcc ttaatgacag 450
acgagcctgg cctagacaac cctgcctacg tgtcctcggc agaggacggg 500
cagccagcaa tcagcccagt ggactctggc cggagcaacc gaactagggc 550
acggcccttt gagagatcca ctattagaag cagatcattt aaaaaataa 600
atcgagcttt gagtgttctt cgaaggacaa agagcgggag tgcagttgcc 650
aaccatgccg accagggcag ggaaaattct gaaaacacca ctgcccctga 700
agtctttcca aggttgtagc acctgattcc agatggtgaa attaccagca 750
tcaagatcaa tcgagtagat ccagtgaaa gcctctctat taggctggtg 800
ggaggtagcg aaacccact ggtccatata attatccaac acatttatcg 850
tgatggggtg atcgccagag acggccggct actgccagga gacatcattc 900
taaagggtcaa cgggatggac atcagcaatg tccctcacia ctacgctgtg 950
cgtctcctgc ggcagccctg ccagggtgctg tggctgactg tgatgcgtga 1000
acagaagttc cgcagcagga acaatggaca ggccccggat gcctacagac 1050
cccgagatga cagctttcat gtgattctca acaaaagtag ccccgaggag 1100
cagcttgga taaaactggt gcgcaagggt gatgagcctg gggttttcat 1150
cttcaatgtg ctggatggcg gtgtggcata tcgacatggt cagcttgagg 1200

agaatgaccg tgtgttagcc atcaatggac atgatcttcg atatggcagc 1250
ccagaaagtg cggctcatct gattcaggcc agtgaaagac gtgttcacct 1300
cgtcgtgtcc cgccagggtc ggcagcggag ccctgacatc tttcaggaag 1350
ccggctggaa cagcaatggc agctgggtccc cagggccagg ggagaggagc 1400
aacactccca agcccctcca tcctacaatt acttgtcatg agaaggtggt 1450
aaatatccaa aaagaccccc gtgaatctct cggcatgacc gtcgcagggg 1500
gagcatcaca tagagaatgg gatttgccta tctatgtcat cagtgttgag 1550
cccggaggag tcataagcag agatggaaga ataaaaacag gtgacatttt 1600
gttgaatgtg gatgggggtc aactgacaga ggtcagccgg agtgaggcag 1650
tggcattatt gaaaagaaca tcctcctcga tagtactcaa agctttggaa 1700
gtcaaagagt atgagcccca ggaagactgc agcagcccag cagccctgga 1750
ctccaaccac aacatggccc caccagtgta ctgggtccca tcctgggtca 1800
tgtggctgga attaccacgg tgcttgtata actgtaaaga tattgtatta 1850
cgaagaaaca cagctggaag tctgggcttc tgcattgtag gaggttatga 1900
agaatacaat ggaaacaaac cttttttcat caaatccatt gttgaaggaa 1950
caccagcata caatgatgga agaattagat gtggtgatat tcttcttgct 2000
gtcaatggta gaagtacatc aggaatgata catgcttgct tggcaagact 2050
gctgaaagaa cttaaaggaa gaattactct aactattggt tcttggcctg 2100
gcactttttt atagaatcaa tgatgggtca gaggaaaaca gaaaaatcac 2150
aaataggcta agaagttgaa aactatatatt tatcttgtca gtttttatat 2200
ttaaagaaag aatacattgt aaaaatgtca ggaaaagtat gatcatctaa 2250
tgaaagccag ttacacctca gaaaatatga ttccaaaaaa attaaaacta 2300
ctagtttttt ttcagtgtgg aggatttctc attactctac aacattgttt 2350
atattttttt tattcaataa aaagccctaa aacaactaaa atgattgatt 2400
tgtatacccc actgaattca agctgattta aatttaaaat ttggtatatg 2450
ctgaagtctg ccaagggtac attatggcca tttttaattt acagctaaaa 2500
tattttttta aatgcattgc tgagaaacgt tgctttcatc aaacaagaat 2550
aaatattttt cagaagttaa a 2571

<210> 219

<211> 632

<212> PRT

<213> Homo sapiens

<400> 219

Met Lys Ala Leu Leu Leu Leu Val Leu Pro Trp Leu Ser Pro Ala

1	5	10	15
Asn Tyr Ile Asp	Asn Val Gly Asn Leu	His Phe Leu Tyr Ser	Glu
	20	25	30
Leu Cys Lys Gly	Ala Ser His Tyr Gly	Leu Thr Lys Asp Arg	Lys
	35	40	45
Arg Arg Ser Gln	Asp Gly Cys Pro Asp	Gly Cys Ala Ser Leu	Thr
	50	55	60
Ala Thr Ala Pro	Ser Pro Glu Val Ser	Ala Ala Ala Thr Ile	Ser
	65	70	75
Leu Met Thr Asp	Glu Pro Gly Leu Asp	Asn Pro Ala Tyr Val	Ser
	80	85	90
Ser Ala Glu Asp	Gly Gln Pro Ala Ile	Ser Pro Val Asp Ser	Gly
	95	100	105
Arg Ser Asn Arg	Thr Arg Ala Arg Pro	Phe Glu Arg Ser Thr	Ile
	110	115	120
Arg Ser Arg Ser	Phe Lys Lys Ile Asn	Arg Ala Leu Ser Val	Leu
	125	130	135
Arg Arg Thr Lys	Ser Gly Ser Ala Val	Ala Asn His Ala Asp	Gln
	140	145	150
Gly Arg Glu Asn	Ser Glu Asn Thr Thr	Ala Pro Glu Val Phe	Pro
	155	160	165
Arg Leu Tyr His	Leu Ile Pro Asp Gly	Glu Ile Thr Ser Ile	Lys
	170	175	180
Ile Asn Arg Val	Asp Pro Ser Glu Ser	Leu Ser Ile Arg Leu	Val
	185	190	195
Gly Gly Ser Glu	Thr Pro Leu Val His	Ile Ile Ile Gln His	Ile
	200	205	210
Tyr Arg Asp Gly	Val Ile Ala Arg Asp	Gly Arg Leu Leu Pro	Gly
	215	220	225
Asp Ile Ile Leu	Lys Val Asn Gly Met	Asp Ile Ser Asn Val	Pro
	230	235	240
His Asn Tyr Ala	Val Arg Leu Leu Arg	Gln Pro Cys Gln Val	Leu
	245	250	255
Trp Leu Thr Val	Met Arg Glu Gln Lys	Phe Arg Ser Arg Asn	Asn
	260	265	270
Gly Gln Ala Pro	Asp Ala Tyr Arg Pro	Arg Asp Asp Ser Phe	His
	275	280	285
Val Ile Leu Asn	Lys Ser Ser Pro Glu	Glu Gln Leu Gly Ile	Lys
	290	295	300
Leu Val Arg Lys	Val Asp Glu Pro Gly	Val Phe Ile Phe Asn	Val
	305	310	315
Leu Asp Gly Gly	Val Ala Tyr Arg His	Gly Gln Leu Glu Glu	Asn

<210> 220
 <211> 773
 <212> DNA
 <213> Homo sapiens

<400> 220
 ccaaagtgat catttgaaaa agagatatcc acatcttcaa gcccatataa 50
 aggatagaag ctgcacaggg cagctttact tactocagca ccttcctctc 100
 ccaggcaaat ggtgctgacc atctttggga tacaatctca tggatacgag 150
 gtttttaaca tcatcagccc aagcaacaat ggtggcaatg ttcaggagac 200
 agtgacaatt gataatgaaa aaaataccgc catcgттаac atccatgcag 250
 gatcatgctc ttctaccaca atttttgact ataaacatgg ctacattgca 300
 tccaggggtgc tctcccgaag agcctgcttt atcctgaaga tggaccatca 350
 gaacatccct cctctgaaca atctccaatg gtacatctat gagaaacagg 400
 ctctggacaa catgttctcc aacaaataca cctgggtcaa gtacaaccct 450
 ctggagtctc tgatcaaaga cgtggattgg ttcctgcttg ggtcacccat 500
 tgagaaactc tgcaaacata tccctttgta taagggggaa gtggttgaaa 550
 acacacataa tgtcgtgtgt ggaggctgtg caaaggctgg gctcctgggc 600
 atcttgggaa tttcaatctg tgcagacatt catgtttagg atgattagcc 650
 ctcttgtttt atcttttcaa agaaatacat ccttggttta cactcaaaag 700
 tcaaattaaa ttctttccca atgccccaac taattttgag attcagtcag 750
 aaaatataaa tgctgtatatt ata 773

<210> 221
 <211> 184
 <212> PRT
 <213> Homo sapiens

<400> 221
 Met Lys Ile Leu Val Ala Phe Leu Val Val Leu Thr Ile Phe Gly
 1 5 10 15
 Ile Gln Ser His Gly Tyr Glu Val Phe Asn Ile Ile Ser Pro Ser
 20 25 30
 Asn Asn Gly Gly Asn Val Gln Glu Thr Val Thr Ile Asp Asn Glu
 35 40 45
 Lys Asn Thr Ala Ile Val Asn Ile His Ala Gly Ser Cys Ser Ser
 50 55 60
 Thr Thr Ile Phe Asp Tyr Lys His Gly Tyr Ile Ala Ser Arg Val
 65 70 75
 Leu Ser Arg Arg Ala Cys Phe Ile Leu Lys Met Asp His Gln Asn
 80 85 90

Ile	Pro	Pro	Leu	Asn	Asn	Leu	Gln	Trp	Tyr	Ile	Tyr	Glu	Lys	Gln
				95					100					105
Ala	Leu	Asp	Asn	Met	Phe	Ser	Asn	Lys	Tyr	Thr	Trp	Val	Lys	Tyr
				110					115					120
Asn	Pro	Leu	Glu	Ser	Leu	Ile	Lys	Asp	Val	Asp	Trp	Phe	Leu	Leu
				125					130					135
Gly	Ser	Pro	Ile	Glu	Lys	Leu	Cys	Lys	His	Ile	Pro	Leu	Tyr	Lys
				140					145					150
Gly	Glu	Val	Val	Glu	Asn	Thr	His	Asn	Val	Gly	Ala	Gly	Gly	Cys
				155					160					165
Ala	Lys	Ala	Gly	Leu	Leu	Gly	Ile	Leu	Gly	Ile	Ser	Ile	Cys	Ala
				170					175					180
Asp Ile His Val														

<210> 222
 <211> 992
 <212> DNA
 <213> Homo sapiens

<400> 222
 ggcacgagcc aggaactagg aggttctcac tgcccagagca gaggccctac 50
 acccaccgag gcatggggct ccttgggctg ttctgcttgg cctgtgtggc 100
 tgccagcagc ttctccaagg cacgggagga agaaattacc cctgtggtct 150
 ccattgccta caaagtcctg gaagttttcc ccaaaggccg ctgggtgctc 200
 ataacctgct gtgcacccca gccaccaccg cccatcacct attccctctg 250
 tggaaccaag aacatcaagg tggccaagaa ggtggtgaag acccagagc 300
 cggcctcctt caacctcaac gtcacactca agtcacgtcc agacctgctc 350
 acctacttct gccgggcgtc ctccacctca ggtgcccattg tggacagtgc 400
 caggctacag atgcactggg agctgtggtc caagccagtg tctgagctgc 450
 gggccaactt cactctgcag gacagagggg caggccccag ggtggagatg 500
 atctgccagg cgtcctcggg cagcccacct atcaccaaca gctgatcgg 550
 gaaggatggg caggtccacc tgcagcagag accatgccac aggcagcctg 600
 ccaacttctc cttcctgccg agccagacat cggactgggtt ctggtgccag 650
 gctgcaaaca acgccaatgt ccagcacagc gccctcacag tgggtgcccc 700
 aggtggtgac cagaagatgg aggactggca ggggtcccctg gagagcccca 750
 tccttgccctt gccgctctac aggagcaccg gccgtctgag tgaagaggag 800
 tttggggggg ttaggatagg gaatgggggag gtcagaggac gcaaagcagc 850
 agccatgtag aatgaaccgt ccagagagcc aagcacggca gaggactgca 900

ggccatcagc gtgcactgtt cgtatttggg gttcatgcaa aatgagtgtg 950

ttttagctgc tcttgccaca aaaaaaaaaa aaaaaaaaaa aa 992

<210> 223

<211> 265

<212> PRT

<213> Homo sapiens

<400> 223

Met	Gly	Leu	Pro	Gly	Leu	Phe	Cys	Leu	Ala	Val	Leu	Ala	Ala	Ser	
1				5					10					15	
Ser	Phe	Ser	Lys	Ala	Arg	Glu	Glu	Glu	Ile	Thr	Pro	Val	Val	Ser	
				20					25					30	
Ile	Ala	Tyr	Lys	Val	Leu	Glu	Val	Phe	Pro	Lys	Gly	Arg	Trp	Val	
				35					40					45	
Leu	Ile	Thr	Cys	Cys	Ala	Pro	Gln	Pro	Pro	Pro	Pro	Ile	Thr	Tyr	
				50					55					60	
Ser	Leu	Cys	Gly	Thr	Lys	Asn	Ile	Lys	Val	Ala	Lys	Lys	Val	Val	
				65					70					75	
Lys	Thr	His	Glu	Pro	Ala	Ser	Phe	Asn	Leu	Asn	Val	Thr	Leu	Lys	
				80					85					90	
Ser	Ser	Pro	Asp	Leu	Leu	Thr	Tyr	Phe	Cys	Arg	Ala	Ser	Ser	Thr	
				95					100					105	
Ser	Gly	Ala	His	Val	Asp	Ser	Ala	Arg	Leu	Gln	Met	His	Trp	Glu	
				110					115					120	
Leu	Trp	Ser	Lys	Pro	Val	Ser	Glu	Leu	Arg	Ala	Asn	Phe	Thr	Leu	
				125					130					135	
Gln	Asp	Arg	Gly	Ala	Gly	Pro	Arg	Val	Glu	Met	Ile	Cys	Gln	Ala	
				140					145					150	
Ser	Ser	Gly	Ser	Pro	Pro	Ile	Thr	Asn	Ser	Leu	Ile	Gly	Lys	Asp	
				155					160					165	
Gly	Gln	Val	His	Leu	Gln	Gln	Arg	Pro	Cys	His	Arg	Gln	Pro	Ala	
				170					175					180	
Asn	Phe	Ser	Phe	Leu	Pro	Ser	Gln	Thr	Ser	Asp	Trp	Phe	Trp	Cys	
				185					190					195	
Gln	Ala	Ala	Asn	Asn	Ala	Asn	Val	Gln	His	Ser	Ala	Leu	Thr	Val	
				200					205					210	
Val	Pro	Pro	Gly	Gly	Asp	Gln	Lys	Met	Glu	Asp	Trp	Gln	Gly	Pro	
				215					220					225	
Leu	Glu	Ser	Pro	Ile	Leu	Ala	Leu	Pro	Leu	Tyr	Arg	Ser	Thr	Arg	
				230					235					240	
Arg	Leu	Ser	Glu	Glu	Glu	Phe	Gly	Gly	Phe	Arg	Ile	Gly	Asn	Gly	
				245					250					255	
Glu	Val	Arg	Gly	Arg	Lys	Ala	Ala	Ala	Met						
				260					265						

<210> 224
 <211> 1297
 <212> DNA
 <213> Homo sapiens

<400> 224
 ggtccttaat ggcagcagcc gccgctacca agatccttct gtgcctcccg 50
 cttctgctcc tgctgtccgg ctgggtcccgg gctggggcag cgcaccctca 100
 ctctctttgc tatgacatca ccgtcatccc taagttcaga cctggaccac 150
 ggtggtgtgc ggttcaaggc cagggtggatg aaaagacttt tcttcactat 200
 gactgtggca acaagacagt cacacctgtc agtcccctgg ggaagaaact 250
 aaatgtcaca acggcctgga aagcacagaa ccagtgactg agagaggtgg 300
 tggacatact tacagagcaa ctgcgtgaca ttcagctgga gaattacaca 350
 cccaaggaac ccctcaccct gcaggcaagg atgtcttgtg agcagaaagc 400
 tgaaggacac agcagtggat cttggcagtt cagtttogat gggcagatct 450
 tcctcctctt tgactcagag aagagaatgt ggacaacggg tcatcctgga 500
 gccagaaaga tgaaagaaaa gtggggagaat gacaagggtt tggccatgtc 550
 cttccattac ttctcaatgg gagactgtat aggatggctt gaggacttct 600
 tgatgggcat ggacagcacc ctggagccaa gtgcaggagc accactcgcc 650
 atgtcctcag gcacaaccca actcagggcc acagccacca ccctcatcct 700
 ttgctgcctc ctcatcatcc tcccctgctt catcctccct ggcatctgag 750
 gagagtcctt tagagtgaca ggttaaagct gataccaaaa ggctcctgtg 800
 agcacggtct tgatcaaact cgccttcttg tctggccagc tgcccacgac 850
 ctacggtgta tgtccagtgg cctccagcag atcatgatga catcatggac 900
 ccaatagctc attcactgcc ttgattcctt ttgccaacaa ttttaccagc 950
 agttatacct aacatattat gcaattttct cttggtgcta cctgatggaa 1000
 ttcttgcaact taaagttctg gctgactaaa caagatatat catcttcttt 1050
 cttctctttt tgtttggaat atcaagtact tctttgaatg atgatctctt 1100
 tcttgcaaat gatattgtca gtaaaataat cacgttagac ttcagacctc 1150
 tggggattct ttccgtgtcc tgaaagagaa tttttaaatt atttaataag 1200
 aaaaaattta tattaatgat tgtttccttt agtaatttat tgttctgtac 1250
 tgatatttaa ataaagagtt ctatttccca aaaaaaaaaa aaaaaaa 1297

<210> 225
 <211> 246
 <212> PRT
 <213> Homo sapiens

<400> 225

```

Met Ala Ala Ala Ala Thr Lys Ile Leu Leu Cys Leu Pro Leu
 1          5          10          15

Leu Leu Leu Leu Ser Gly Trp Ser Arg Ala Gly Arg Ala Asp Pro
          20          25          30

His Ser Leu Cys Tyr Asp Ile Thr Val Ile Pro Lys Phe Arg Pro
          35          40          45

Gly Pro Arg Trp Cys Ala Val Gln Gly Gln Val Asp Glu Lys Thr
          50          55          60

Phe Leu His Tyr Asp Cys Gly Asn Lys Thr Val Thr Pro Val Ser
          65          70          75

Pro Leu Gly Lys Lys Leu Asn Val Thr Thr Ala Trp Lys Ala Gln
          80          85          90

Asn Pro Val Leu Arg Glu Val Val Asp Ile Leu Thr Glu Gln Leu
          95          100          105

Arg Asp Ile Gln Leu Glu Asn Tyr Thr Pro Lys Glu Pro Leu Thr
          110          115          120

Leu Gln Ala Arg Met Ser Cys Glu Gln Lys Ala Glu Gly His Ser
          125          130          135

Ser Gly Ser Trp Gln Phe Ser Phe Asp Gly Gln Ile Phe Leu Leu
          140          145          150

Phe Asp Ser Glu Lys Arg Met Trp Thr Thr Val His Pro Gly Ala
          155          160          165

Arg Lys Met Lys Glu Lys Trp Glu Asn Asp Lys Val Val Ala Met
          170          175          180

Ser Phe His Tyr Phe Ser Met Gly Asp Cys Ile Gly Trp Leu Glu
          185          190          195

Asp Phe Leu Met Gly Met Asp Ser Thr Leu Glu Pro Ser Ala Gly
          200          205          210

Ala Pro Leu Ala Met Ser Ser Gly Thr Thr Gln Leu Arg Ala Thr
          215          220          225

Ala Thr Thr Leu Ile Leu Cys Cys Leu Leu Ile Ile Leu Pro Cys
          230          235          240

Phe Ile Leu Pro Gly Ile
          245

```

<210> 226

<211> 735

<212> DNA

<213> Homo sapiens

<400> 226

```

gggaaagcca tttcgaaaac ccatctatac aaactatata ttttcatttc 50

tgctgctagc tgccttgggc ctcacaattt tcattctgtt ttctgacttt 100

caagttatat accgtggaat ggagttgatc ccaaccataa catcgtggag 150

```

ggttttaatt ttggtggtag ccctcaccca attctggtgt ggctttcttt 200
gcagaggatt ccaccttcaa aatcatgaac tctggctgtt gatcaaaaga 250
gaatttggtat tctactctaa aagtcaatat aggacttggc aaaagaagct 300
agcagaagac tcaacctggc ctcccataaa caggacagat tattcaggtg 350
atggcaaaaaa tggattctac atcaacggag gctatgaaag ccatgaacag 400
attccaaaaa gaaaactcaa attgggagggc caaccacag aacagcattt 450
ctggggccagg ctgtaatcag aattgtcgtc gtacatgctc aacagcattg 500
cttttttccc caaaattaac acattgtgga gaagtgatga tactctcccc 550
ttacctttcc tctctccatt caagcattca aagtatattt tcaatgaatt 600
aaaccttgca gcaagggacc ttagataggc ttattctgac tgtatgcttt 650
accaatgaga gaaaaaaatg catttcctgt atcatccttt tcaataaact 700
gtattcattt tgaaaaaaaa aaaaaaaaaa aaaaa 735

<210> 227
<211> 115
<212> PRT
<213> Homo sapiens

<400> 227
Met Glu Leu Ile Pro Thr Ile Thr Ser Trp Arg Val Leu Ile Leu
1 5 10 15
Val Val Ala Leu Thr Gln Phe Trp Cys Gly Phe Leu Cys Arg Gly
20 25 30
Phe His Leu Gln Asn His Glu Leu Trp Leu Leu Ile Lys Arg Glu
35 40 45
Phe Gly Phe Tyr Ser Lys Ser Gln Tyr Arg Thr Trp Gln Lys Lys
50 55 60
Leu Ala Glu Asp Ser Thr Trp Pro Pro Ile Asn Arg Thr Asp Tyr
65 70 75
Ser Gly Asp Gly Lys Asn Gly Phe Tyr Ile Asn Gly Gly Tyr Glu
80 85 90
Ser His Glu Gln Ile Pro Lys Arg Lys Leu Lys Leu Gly Gly Gln
95 100 105
Pro Thr Glu Gln His Phe Trp Ala Arg Leu
110 115

<210> 228
<211> 2185
<212> DNA
<213> Homo sapiens

<400> 228
gttctccttt ccgagccaaa atcccaggcg atggtgaatt atgaacgtgc 50
cacaccatga agctcttgtg gcaggtaact gtgcaccacc acacctggaa 100

tgccatcctg ctcccgttcg tctacctcac ggcgcaagtg tggattctgt 150
 gtgcagccat cgctgctgcc gcctcagcog ggccccagaa ctgcccctcc 200
 gtttgctcgt gcagtaacca gttcagcaag gtggtgtgca cgcgccgggg 250
 cctctccgag gtcccgcagg gtattccctc gaacaccogg tacctcaacc 300
 tcatggagaa caacatccag atgatccagg ccgacacctt ccgccacctc 350
 caccacctgg aggtcctgca gttgggcagg aactccatcc ggcagattga 400
 ggtggggggc ttcaacggcc tggccagcct caacaccctg gagctgttcg 450
 acaactggct gacagtcata cctagcgggg cctttgaata cctgtccaag 500
 ctgcggggagc tctggcttcg caacaacccc atcgaaagca tcccctctta 550
 cgccttcaac cgggtgccct ccctcatgog cctggacttg ggggagctca 600
 agaagctgga gtatatctct gagggagctt ttgaggggct gttcaacctc 650
 aagtatctga acttgggcat gtgcaacatt aaagacatgc ccaatctcac 700
 ccccctggtg gggctggagg agctggagat gtcaggggaa cacttccctg 750
 agatcaggcc tggctccttc catggcctga gctccctcaa gaagctctgg 800
 gtcatgaact cacaggtcag cctgattgag cggaatgctt ttgacgggct 850
 ggcttcactt gtggaactca acttgggcca caataacctc tcttctttgc 900
 cccatgacct ctttaccocg ctgaggtacc tgggtggagt gcactctacac 950
 cacaaccctt ggaactgtga ttgtgacatt ctgtggctag cctggtggct 1000
 tcgagagtat ataccacca attccacctg ctgtggccgc tgtcatgctc 1050
 ccatgcacat gcgaggccgc tacctcgtgg aggtggacca ggccctccttc 1100
 cagtgccttg ccccttcat catggacgca cctcgagacc tcaacatttc 1150
 tgagggctcg atggcagaac ttaagtgtcg gactccccct atgtcctccg 1200
 tgaagtgggt gctgccaat gggacagtgc tcagccacgc ctcccgcac 1250
 ccaaggatct ctgtcctcaa cgacggcacc ttgaactttt cccacgtgct 1300
 gctttcagac actggggtgt acacatgcat ggtgaccaat gttgcaggca 1350
 actccaacgc ctcggcctac ctcaatgtga gcacggctga gcttaacacc 1400
 tccaactaca gcttcttcac cacagtaaca gtggagacca cggagatctc 1450
 gcctgaggac acaacgcgaa agtacaagcc tgttcctacc acgtccactg 1500
 gttaccagcc ggcatatacc acctctacca cgggtgctcat tcagactacc 1550
 cgtgtgcca agcaggtggc agtaccocg acagacacca ctgacaagat 1600
 gcagaccagc ctggatgaag tcatgaagac caccaagatc atcattggct 1650
 gctttgtggc agtgactctg ctagctgcog ccatgttgat tgtcttctat 1700

[illegible]

<211> 653

<212> PRT

<213> Homo sapiens

<400> 229

Ala Ile Leu Leu Pro Phe Val Tyr Leu Thr Ala Gln Val Trp Ile
20 25 30

Leu Cys Ala Ala Ile Ala Ala Ala Ala Ser Ala Gly Pro Gln Asn
35 40 45

Cys Pro Ser Val Cys Ser Cys Ser Asn Gln Phe Ser Lys Val Val
50 55 60

Cys Thr Arg Arg Gly Leu Ser Glu Val Pro Gln Gly Ile Pro Ser
65 70 75

Asn Thr Arg Tyr Leu Asn Leu Met Glu Asn Asn Ile Gln Met Ile
80 85 90

Gln Ala Asp Thr Phe Arg His Leu His His Leu Glu Val Leu Gln
95 100 105

Leu Gly Arg Asn Ser Ile Arg Gln Ile Glu Val Gly Ala Phe Asn
110 115 120

Gly Leu Ala Ser Leu Asn Thr Leu Glu Leu Phe Asp Asn Trp Leu
125 130 135

Thr Val Ile Pro Ser Gly Ala Phe Glu Tyr Leu Ser Lys Leu Arg
140 145 150

Glu Leu Trp Leu Arg Asn Asn Pro Ile Glu Ser Ile Pro Ser Tyr
155 160 165

Ala Phe Asn Arg Val Pro Ser Leu Met Arg Leu Asp Leu Gly Glu
170 175 180

Leu Lys Lys Leu Glu Tyr Ile Ser Glu Gly Ala Phe Glu Gly Leu

gcataggatc ctcaactccac gtccctcttcc actccgatgg ctccaagaat 700
 tttgacgggt tccatgccat ttatgaggag atcacagcat gctccctcatc 750
 cccttgtttc catgacggca cgtgcgtcct tgacaaggct ggatcttaca 800
 agtgtgcctg cttggcaggc tatactgggc agcgtgtga aaatctcctt 850
 gaagaaagaa actgctcaga ccctgggggc ccagtcaatg ggtaccagaa 900
 aataacaggg ggccctgggc ttatcaacgg acgccatgct aaaattggca 950
 ccgtgggtgtc tttcttttgt aacaactcct atgttcttag tggcaatgag 1000
 aaaagaactt gccagcagaa tggagagtgg tcaggggaaac agcccatctg 1050
 cataaaagcc tgccgagaac caaagatttc agacctggtg agaaggagag 1100
 ttcttccgat gcaggttcag tcaagggaga caccattaca ccagctatac 1150
 tcagcggcct tcagcaagca gaaactgcag agtgccccta ccaagaagcc 1200
 agcccttccc tttggagatc tgcccatggg ataccaacat ctgcataccc 1250
 agctccagta tgagtgcac tcacccttct accgccgcct gggcagcagc 1300
 aggaggacat gtctgaggac tgggaagtgg agtgggcggg caccatcctg 1350
 catccctatc tgccgggaaaa ttgagaacat cactgctcca aagacccaag 1400
 ggttgcgctg gccgtggcag gcagccatct acaggaggac cagcggggtg 1450
 catgacggca gcctacacaa gggagcgtgg ttcctagtct gcagcgggtg 1500
 cctgggtgaat gagcgactg tgggtggggc tgcccactgt gttactgacc 1550
 tggggaaggt caccatgatc aagacagcag acctgaaagt tgttttgggg 1600
 aaattctacc gggatgatga ccgggatgag aagaccatcc agagcctaca 1650
 gatttctgct atcattctgc atcccaacta tgaccccatc ctgcttgatg 1700
 ctgacatcgc catcctgaag ctccatagaca aggcccgatc cagcaccoga 1750
 gtccagccca tctgcctcgc tgccagtcgg gatctcagca cttccttcca 1800
 ggagtccac atcactgtgg ctggctggaa tgtcctggca gacgtgagga 1850
 gccctggctt caagaacgac aactgcgct ctggggtggg cagtgtgggtg 1900
 gactcgtgc tgtgtgagga gcagcatgag gaccatggca tcccagtgag 1950
 tgtcactgat aacatgttct gtgccagctg ggaacccact gccctttotg 2000
 atatctgcac tgcagagaca ggaggcatcg cggctgtgtc cttcccggga 2050
 cgagcatctc ctgagccacg ctggcatctg atgggactgg tcagctggag 2100
 ctatgataaa acatgcagcc acaggctctc cactgccttc accaagggtgc 2150
 tgccttttaa agactggatt gaaagaaata tgaaatgaac catgctcatg 2200
 cactccttga gaagtgttc tgtatatccg tctgtacgtg tgtcattgcg 2250

tgaagcagtg tgggcctgaa gtgtgatttg gcctgtgaac ttggctgtgc 2300
cagggtcttct gacttcaggg acaaaactca gtgaaggggtg agtagacctc 2350
cattgctgggt aggctgatgc cgcgtccact actaggacag ccaattggaa 2400
gatgccaggg cttgcaagaa gtaagtttct tcaaagaaga ccatatacaa 2450
aacctctcca ctccactgac ctggtggtct tccccaactt tcagttatac 2500
gaatgccatc agcttgacca gggaagatct gggcttcatg aggccccttt 2550
tgaggctctc aagttctaga gagctgcctg tgggacagcc cagggcagca 2600
gagctgggat gtggtgcatg cctttgtgta catggccaca gtacagtctg 2650
gtcctttttcc ttcccatct cttgtacaca ttttaataaa ataagggttg 2700
gcttctgaac tacaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2750
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2800
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 2846

<210> 231
<211> 720
<212> PRT
<213> Homo sapiens

<400> 231
Met Glu Leu Gly Cys Trp Thr Gln Leu Gly Leu Thr Phe Leu Gln
1 5 10 15
Leu Leu Leu Ile Ser Ser Leu Pro Arg Glu Tyr Thr Val Ile Asn
20 25 30
Glu Ala Cys Pro Gly Ala Glu Trp Asn Ile Met Cys Arg Glu Cys
35 40 45
Cys Glu Tyr Asp Gln Ile Glu Cys Val Cys Pro Gly Lys Arg Glu
50 55 60
Val Val Gly Tyr Thr Ile Pro Cys Cys Arg Asn Glu Glu Asn Glu
65 70 75
Cys Asp Ser Cys Leu Ile His Pro Gly Cys Thr Ile Phe Glu Asn
80 85 90
Cys Lys Ser Cys Arg Asn Gly Ser Trp Gly Gly Thr Leu Asp Asp
95 100 105
Phe Tyr Val Lys Gly Phe Tyr Cys Ala Glu Cys Arg Ala Gly Trp
110 115 120
Tyr Gly Gly Asp Cys Met Arg Cys Gly Gln Val Leu Arg Ala Pro
125 130 135
Lys Gly Gln Ile Leu Leu Glu Ser Tyr Pro Leu Asn Ala His Cys
140 145 150
Glu Trp Thr Ile His Ala Lys Pro Gly Phe Val Ile Gln Leu Arg
155 160 165

Phe	Val	Met	Leu	Ser	Leu	Glu	Phe	Asp	Tyr	Met	Cys	Gln	Tyr	Asp	
				170					175					180	
Tyr	Val	Glu	Val	Arg	Asp	Gly	Asp	Asn	Arg	Asp	Gly	Gln	Ile	Ile	
				185					190					195	
Lys	Arg	Val	Cys	Gly	Asn	Glu	Arg	Pro	Ala	Pro	Ile	Gln	Ser	Ile	
				200					205					210	
Gly	Ser	Ser	Leu	His	Val	Leu	Phe	His	Ser	Asp	Gly	Ser	Lys	Asn	
				215					220					225	
Phe	Asp	Gly	Phe	His	Ala	Ile	Tyr	Glu	Glu	Ile	Thr	Ala	Cys	Ser	
				230					235					240	
Ser	Ser	Pro	Cys	Phe	His	Asp	Gly	Thr	Cys	Val	Leu	Asp	Lys	Ala	
				245					250					255	
Gly	Ser	Tyr	Lys	Cys	Ala	Cys	Leu	Ala	Gly	Tyr	Thr	Gly	Gln	Arg	
				260					265					270	
Cys	Glu	Asn	Leu	Leu	Glu	Glu	Arg	Asn	Cys	Ser	Asp	Pro	Gly	Gly	
				275					280					285	
Pro	Val	Asn	Gly	Tyr	Gln	Lys	Ile	Thr	Gly	Gly	Pro	Gly	Leu	Ile	
				290					295					300	
Asn	Gly	Arg	His	Ala	Lys	Ile	Gly	Thr	Val	Val	Ser	Phe	Phe	Cys	
				305					310					315	
Asn	Asn	Ser	Tyr	Val	Leu	Ser	Gly	Asn	Glu	Lys	Arg	Thr	Cys	Gln	
				320					325					330	
Gln	Asn	Gly	Glu	Trp	Ser	Gly	Lys	Gln	Pro	Ile	Cys	Ile	Lys	Ala	
				335					340					345	
Cys	Arg	Glu	Pro	Lys	Ile	Ser	Asp	Leu	Val	Arg	Arg	Arg	Val	Leu	
				350					355					360	
Pro	Met	Gln	Val	Gln	Ser	Arg	Glu	Thr	Pro	Leu	His	Gln	Leu	Tyr	
				365					370					375	
Ser	Ala	Ala	Phe	Ser	Lys	Gln	Lys	Leu	Gln	Ser	Ala	Pro	Thr	Lys	
				380					385					390	
Lys	Pro	Ala	Leu	Pro	Phe	Gly	Asp	Leu	Pro	Met	Gly	Tyr	Gln	His	
				395					400					405	
Leu	His	Thr	Gln	Leu	Gln	Tyr	Glu	Cys	Ile	Ser	Pro	Phe	Tyr	Arg	
				410					415					420	
Arg	Leu	Gly	Ser	Ser	Arg	Arg	Thr	Cys	Leu	Arg	Thr	Gly	Lys	Trp	
				425					430					435	
Ser	Gly	Arg	Ala	Pro	Ser	Cys	Ile	Pro	Ile	Cys	Gly	Lys	Ile	Glu	
				440					445					450	
Asn	Ile	Thr	Ala	Pro	Lys	Thr	Gln	Gly	Leu	Arg	Trp	Pro	Trp	Gln	
				455					460					465	
Ala	Ala	Ile	Tyr	Arg	Arg	Thr	Ser	Gly	Val	His	Asp	Gly	Ser	Leu	
				470					475					480	

His	Lys	Gly	Ala	Trp	Phe	Leu	Val	Cys	Ser	Gly	Ala	Leu	Val	Asn	485	490	495
Glu	Arg	Thr	Val	Val	Val	Ala	Ala	His	Cys	Val	Thr	Asp	Leu	Gly	500	505	510
Lys	Val	Thr	Met	Ile	Lys	Thr	Ala	Asp	Leu	Lys	Val	Val	Leu	Gly	515	520	525
Lys	Phe	Tyr	Arg	Asp	Asp	Asp	Arg	Asp	Glu	Lys	Thr	Ile	Gln	Ser	530	535	540
Leu	Gln	Ile	Ser	Ala	Ile	Ile	Leu	His	Pro	Asn	Tyr	Asp	Pro	Ile	545	550	555
Leu	Leu	Asp	Ala	Asp	Ile	Ala	Ile	Leu	Lys	Leu	Leu	Asp	Lys	Ala	560	565	570
Arg	Ile	Ser	Thr	Arg	Val	Gln	Pro	Ile	Cys	Leu	Ala	Ala	Ser	Arg	575	580	585
Asp	Leu	Ser	Thr	Ser	Phe	Gln	Glu	Ser	His	Ile	Thr	Val	Ala	Gly	590	595	600
Trp	Asn	Val	Leu	Ala	Asp	Val	Arg	Ser	Pro	Gly	Phe	Lys	Asn	Asp	605	610	615
Thr	Leu	Arg	Ser	Gly	Val	Val	Ser	Val	Val	Asp	Ser	Leu	Leu	Cys	620	625	630
Glu	Glu	Gln	His	Glu	Asp	His	Gly	Ile	Pro	Val	Ser	Val	Thr	Asp	635	640	645
Asn	Met	Phe	Cys	Ala	Ser	Trp	Glu	Pro	Thr	Ala	Pro	Ser	Asp	Ile	650	655	660
Cys	Thr	Ala	Glu	Thr	Gly	Gly	Ile	Ala	Ala	Val	Ser	Phe	Pro	Gly	665	670	675
Arg	Ala	Ser	Pro	Glu	Pro	Arg	Trp	His	Leu	Met	Gly	Leu	Val	Ser	680	685	690
Trp	Ser	Tyr	Asp	Lys	Thr	Cys	Ser	His	Arg	Leu	Ser	Thr	Ala	Phe	695	700	705
Thr	Lys	Val	Leu	Pro	Phe	Lys	Asp	Trp	Ile	Glu	Arg	Asn	Met	Lys	710	715	720

<210> 232

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 232

aggttcgtga tggagacaac cgcg 24

<210> 233

<211> 24

<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 233
tgtcaaggac gcactgccgt catg 24

<210> 234
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 234
tggccagatc atcaagcgtg tctgtggcaa cgagcggcca gtcctatcc 50

<210> 235
<211> 1964
<212> DNA
<213> Homo sapiens

<400> 235
accaggcatt gtatcttcag ttgtcatcaa gttcgcaatc agattggaaa 50
agctcaactt gaagctttct tgcctgcagt gaagcagaga gatagatatt 100
attcacgtaa taaaaaacat gggcttcaac ctgactttcc acctttccta 150
caaattccga ttactgttgc tgttgacttt gtgcctgaca gtggttgggt 200
gggccaccag taactacttc gtgggtgcca ttcaagagat tcctaaagca 250
aaggagtcca tggctaattt ccataagacc ctcatTTtTg ggaagggaaa 300
aactctgact aatgaagcat ccacgaagaa ggtagaactt gacaactgtc 350
cttctgtgtc tccttacctc agaggccaga gcaagctcat tttcaaacca 400
gatctcactt tggaagaggt acaggcagaa aatcccaaag tgtccagagg 450
ccggtatcgc cctcaggaat gtaaagcttt acagagggtc gccatcctcg 500
ttccccaccg gaacagagag aaacacctga tgtacctgct ggaacatctg 550
catcccttcc tgcagaggca gcagctggat tatggcatct acgtcatcca 600
ccaggctgaa ggtaaaaagt ttaatcgagc caaactcttg aatgtgggct 650
atctagaagc cctcaaggaa gaaaattggg actgctttat attccacgat 700
gtggacctgg tacccgagaa tgactttaac ctttacaagt gtgaggagca 750
tcccaagcat ctggtggttg gcaggaacag cactgggtac aggttacgtt 800
acagtggata ttttgggggt gttactgcc taagcagaga gcagtttttc 850
aagggtgaatg gattctctaa caactactgg ggatggggag gcgaagacga 900
tgacctcaga ctcagggttg agtccaaag aatgaaaatt tcccggtccc 950
tgctgaagt gggtaaatat acaatggtct tccacactag agacaaaggc 1000

aatgaggtga acgcagaacg gatgaagctc ttacaccaag tgtcacgagt 1050
 ctggagaaca gatgggttga gtagttgttc ttataaatta gtatctgtgg 1100
 aacacaatcc tttatatatc aacatcacag tggattttctg gtttggtgca 1150
 tgaccctgga tcttttggtg atgtttggaa gaactgattc tttgtttgca 1200
 ataattttgg cctagagact tcaaatagta gcacacatta agaacctgtt 1250
 acagctcatt gttgagctga atttttcctt tttgtatttt cttagcagag 1300
 ctcttggtga tgtagagtat aaaacagttg taacaagaca gctttcttag 1350
 tcattttgat catgaggggtt aaatattgta atatggatac ttgaaggact 1400
 ttatataaaa ggatgactca aaggataaaa tgaacgctat ttgaggactc 1450
 tggttgaagg agattttattt aaatttgaag taatatatta tgggataaaa 1500
 ggccacagga aataagactg ctgaatgtct gagagaacca gagttgttct 1550
 cgtccaaggt agaaaggtag gaagatacaa tactgttatt cttttatcct 1600
 gtacaatcat ctgtgaagtg gtggtgtcag gtgagaaggc gtccacaaaa 1650
 gaggggagaa aaggcgacga atcaggacac agtgaacttg ggaatgaaga 1700
 ggtagcagga ggggtggagtg tcggctgcaa aggcagcagt agctgagctg 1750
 gttgcaggtg ctgatagcct tcaggggagg acctgcccag gtatgccttc 1800
 cagtgatgcc caccagagaa tacattctct attagttttt aaagagtttt 1850
 tgtaaaatga ttttgtacaa gtaggatatg aattagcagt ttacaagttt 1900
 acatattaac taataataaa tatgtctatc aaatacctct gtagtaaaat 1950
 gtgaaaaagc aaaa 1964

<210> 236
 <211> 344
 <212> PRT
 <213> Homo sapiens

<220>
 <221> Signal peptide
 <222> 1-27
 <223> Signal peptide

<220>
 <221> N-glycosylation sites
 <222> 4-7, 220-223, 335-338
 <223> N-glycosylation sites

<220>
 <221> Xylose isomerase proteins
 <222> 191-201
 <223> Xylose isomerase proteins

<400> 236
 Met Gly Phe Asn Leu Thr Phe His Leu Ser Tyr Lys Phe Arg Leu
 1 5 10 15

Leu	Leu	Leu	Leu	Thr	Leu	Cys	Leu	Thr	Val	Val	Gly	Trp	Ala	Thr	
				20					25					30	
Ser	Asn	Tyr	Phe	Val	Gly	Ala	Ile	Gln	Glu	Ile	Pro	Lys	Ala	Lys	
				35					40					45	
Glu	Phe	Met	Ala	Asn	Phe	His	Lys	Thr	Leu	Ile	Leu	Gly	Lys	Gly	
				50					55					60	
Lys	Thr	Leu	Thr	Asn	Glu	Ala	Ser	Thr	Lys	Lys	Val	Glu	Leu	Asp	
				65					70					75	
Asn	Cys	Pro	Ser	Val	Ser	Pro	Tyr	Leu	Arg	Gly	Gln	Ser	Lys	Leu	
				80					85					90	
Ile	Phe	Lys	Pro	Asp	Leu	Thr	Leu	Glu	Glu	Val	Gln	Ala	Glu	Asn	
				95					100					105	
Pro	Lys	Val	Ser	Arg	Gly	Arg	Tyr	Arg	Pro	Gln	Glu	Cys	Lys	Ala	
				110					115					120	
Leu	Gln	Arg	Val	Ala	Ile	Leu	Val	Pro	His	Arg	Asn	Arg	Glu	Lys	
				125					130					135	
His	Leu	Met	Tyr	Leu	Leu	Glu	His	Leu	His	Pro	Phe	Leu	Gln	Arg	
				140					145					150	
Gln	Gln	Leu	Asp	Tyr	Gly	Ile	Tyr	Val	Ile	His	Gln	Ala	Glu	Gly	
				155					160					165	
Lys	Lys	Phe	Asn	Arg	Ala	Lys	Leu	Leu	Asn	Val	Gly	Tyr	Leu	Glu	
				170					175					180	
Ala	Leu	Lys	Glu	Glu	Asn	Trp	Asp	Cys	Phe	Ile	Phe	His	Asp	Val	
				185					190					195	
Asp	Leu	Val	Pro	Glu	Asn	Asp	Phe	Asn	Leu	Tyr	Lys	Cys	Glu	Glu	
				200					205					210	
His	Pro	Lys	His	Leu	Val	Val	Gly	Arg	Asn	Ser	Thr	Gly	Tyr	Arg	
				215					220					225	
Leu	Arg	Tyr	Ser	Gly	Tyr	Phe	Gly	Gly	Val	Thr	Ala	Leu	Ser	Arg	
				230					235					240	
Glu	Gln	Phe	Phe	Lys	Val	Asn	Gly	Phe	Ser	Asn	Asn	Tyr	Trp	Gly	
				245					250					255	
Trp	Gly	Gly	Glu	Asp	Asp	Asp	Leu	Arg	Leu	Arg	Val	Glu	Leu	Gln	
				260					265					270	
Arg	Met	Lys	Ile	Ser	Arg	Pro	Leu	Pro	Glu	Val	Gly	Lys	Tyr	Thr	
				275					280					285	
Met	Val	Phe	His	Thr	Arg	Asp	Lys	Gly	Asn	Glu	Val	Asn	Ala	Glu	
				290					295					300	
Arg	Met	Lys	Leu	Leu	His	Gln	Val	Ser	Arg	Val	Trp	Arg	Thr	Asp	
				305					310					315	
Gly	Leu	Ser	Ser	Cys	Ser	Tyr	Lys	Leu	Val	Ser	Val	Glu	His	Asn	
				320					325					330	

Pro Leu Tyr Ile Asn Ile Thr Val Asp Phe Trp Phe Gly Ala
 335 340

<210> 237
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 237
 ccttacctca gaggccagag caagc 25

<210> 238
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 238
 gagcttcacgc cgttctgcgt tcacc 25

<210> 239
 <211> 46
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 239
 caggaatgta aagctttaca gagggtcgcc atcctcgttc cccacc 46

<210> 240
 <211> 2567
 <212> DNA
 <213> Homo sapiens

<400> 240
 cgtgggccgg ggtcgcgcag cgggctgtgg gcgcgcccg aggagcgacc 50
 gccgcagttc tcgagctcca gctgcattcc ctccgcgtcc gcccacgct 100
 tctcccgtc cgggccccgc aatggccag gcagtgtggt cgcgcctcgg 150
 ccgcacctc tggcttgct gcctcctgcc ctgggccccg gcaggggtgg 200
 ccgcaggcct gtatgaactc aatctcacca ccgatagccc tgccaccacg 250
 ggagcgggtg tgaccatctc ggccagcctg gtggccaagg acaacggcag 300
 cctggccctg cccgctgacg cccacctcta ccgcttcac tggatccaca 350
 ccccgtggt gcttactggc aagatggaga agggctcag ctccaccatc 400
 cgtgtggtcg gccacgtgcc cggggaattc ccggtctctg tctgggtcac 450
 tgccgctgac tgctggatgt gccagcctgt ggccaggggc tttgtggtcc 500
 tccccatcac agagttcctc gtgggggacc ttgttgtcac ccagaacact 550

tccctaccct ggcccagctc ctatctcact aagaccgtcc tgaaagtctc 600
 cttcctcctc cagcaccga gcaacttcct caagaccgcc ttgtttctct 650
 acagctggga cttcggggac gggaccacaga tggtgactga agactccgtg 700
 gtctattata actattccat catcgggacc ttcaccgtga agctcaaagt 750
 ggtggcggag tgggaagagg tggagccgga tgccacgagg gctgtgaagc 800
 agaagaccgg ggacttctcc gcctcgtga agctgcagga aaccttcga 850
 ggcatccaag tggtggggcc caccctaatt cagaccttc aaaagatgac 900
 cgtgaccttg aacttcctgg ggagccctcc tctgactgtg tgctggcgtc 950
 tcaagcctga gtgcctccc ctggagggaag gggagtgcc ccctgtgtcc 1000
 gtggccagca cagcgtacaa cctgaccac accttcaggg acctgggga 1050
 ctactgcttc agcatccggg ccgagaatat catcagcaag acacatcagt 1100
 accacaagat ccagggtgtg ccctccagaa tccagccggc tgtctttgct 1150
 ttcccatgtg ctacacttat cactgtgatg ttggccttca tcatgtacat 1200
 gacctgctg aatgccactc agcaaaagga catggtggag aaccgggagc 1250
 caccctctgg ggtcagggtc tgctgccaga tgtgctgtgg gcctttcttg 1300
 ctggagactc catctgagta cctggaaatt gtctgtgaga accacgggct 1350
 gctcccgccc ctctataagt ctgtcaaac ttacaccgtg tgagcactcc 1400
 ccctccccac cccatctcag tgttaactga ctgctgactt ggagtttcca 1450
 gcagggtggt gtgcaccact gaccaggagg ggttcatttg cgtggggctg 1500
 ttggcctgga tcatccatcc atctgtacag ttcagccact gccacaagcc 1550
 cctccctctc tgtcaccctc gacccagcc attcaccat ctgtacagtc 1600
 cagccactga cataagcccc actcgggttac caccctcttg acccctacc 1650
 tttgaagagg ctctgtcag gactttgatg cttgggggtgt tccgtgttga 1700
 ctctaggtg ggctggctg cccactgcc attcctctca tattggcaca 1750
 tctgctgtcc attgggggtt ctcagtttc tccccagac agccctacct 1800
 gtgccagaga gctagaaaga aggtcataaa ggggttaaaa tccataacta 1850
 aagggtgtac acatagatgg gcacactcac agagagaagt gtgcatgtac 1900
 acacaccaca cacacacaca cacacacaca cacagaaata taaacacatg 1950
 cgtcacatgg gcatttcaga tgatcagctc tgtatctggt taagtcggtt 2000
 gctgggatgc acctgcact agagctgaaa ggaaatttga cctccaagca 2050
 gccctgacag gttctgggccc cgggcccctcc ctttgtgctt tgtctctgca 2100
 gttcttgcgc cctttataag gccatcctag tccctgctgg ctggcagggg 2150

cctggatggg gggcaggact aatactgagt gattgcagag tgctttataa 2200
 atatcacctt attttatcga aacccatctg tgaaactttc actgaggaaa 2250
 aggccttgca gcggtagaag aggttgagtc aaggccgggc gcggtggctc 2300
 acgcctgtaa tcccagcact ttgggaggcc gaggcgggtg gatcaogaga 2350
 tcaggagatc gagaccaccc tggctaacac ggtgaaaccc cgtctctact 2400
 aaaaaaatac aaaaagttag ccggggcgtgg tgggtgggtgc ctgtagtccc 2450
 agctactcgg gaggctgagg caggagaatg gtgcgaaccc gggaggcgga 2500
 gcttgcaagt agcccagatg gcgccactgc actccagcct gagtgcacaga 2550
 gcgagactct gtctcca 2567

<210> 241
 <211> 423
 <212> PRT
 <213> Homo sapiens

<400> 241
 Met Ala Gln Ala Val Trp Ser Arg Leu Gly Arg Ile Leu Trp Leu
 1 5 10 15
 Ala Cys Leu Leu Pro Trp Ala Pro Ala Gly Val Ala Ala Gly Leu
 20 25 30
 Tyr Glu Leu Asn Leu Thr Thr Asp Ser Pro Ala Thr Thr Gly Ala
 35 40 45
 Val Val Thr Ile Ser Ala Ser Leu Val Ala Lys Asp Asn Gly Ser
 50 55 60
 Leu Ala Leu Pro Ala Asp Ala His Leu Tyr Arg Phe His Trp Ile
 65 70 75
 His Thr Pro Leu Val Leu Thr Gly Lys Met Glu Lys Gly Leu Ser
 80 85 90
 Ser Thr Ile Arg Val Val Gly His Val Pro Gly Glu Phe Pro Val
 95 100 105
 Ser Val Trp Val Thr Ala Ala Asp Cys Trp Met Cys Gln Pro Val
 110 115 120
 Ala Arg Gly Phe Val Val Leu Pro Ile Thr Glu Phe Leu Val Gly
 125 130 135
 Asp Leu Val Val Thr Gln Asn Thr Ser Leu Pro Trp Pro Ser Ser
 140 145 150
 Tyr Leu Thr Lys Thr Val Leu Lys Val Ser Phe Leu Leu His Asp
 155 160 165
 Pro Ser Asn Phe Leu Lys Thr Ala Leu Phe Leu Tyr Ser Trp Asp
 170 175 180
 Phe Gly Asp Gly Thr Gln Met Val Thr Glu Asp Ser Val Val Tyr
 185 190 195

Tyr	Asn	Tyr	Ser	Ile	Ile	Gly	Thr	Phe	Thr	Val	Lys	Leu	Lys	Val
				200					205					210
Val	Ala	Glu	Trp	Glu	Glu	Val	Glu	Pro	Asp	Ala	Thr	Arg	Ala	Val
				215					220					225
Lys	Gln	Lys	Thr	Gly	Asp	Phe	Ser	Ala	Ser	Leu	Lys	Leu	Gln	Glu
				230					235					240
Thr	Leu	Arg	Gly	Ile	Gln	Val	Leu	Gly	Pro	Thr	Leu	Ile	Gln	Thr
				245					250					255
Phe	Gln	Lys	Met	Thr	Val	Thr	Leu	Asn	Phe	Leu	Gly	Ser	Pro	Pro
				260					265					270
Leu	Thr	Val	Cys	Trp	Arg	Leu	Lys	Pro	Glu	Cys	Leu	Pro	Leu	Glu
				275					280					285
Glu	Gly	Glu	Cys	His	Pro	Val	Ser	Val	Ala	Ser	Thr	Ala	Tyr	Asn
				290					295					300
Leu	Thr	His	Thr	Phe	Arg	Asp	Pro	Gly	Asp	Tyr	Cys	Phe	Ser	Ile
				305					310					315
Arg	Ala	Glu	Asn	Ile	Ile	Ser	Lys	Thr	His	Gln	Tyr	His	Lys	Ile
				320					325					330
Gln	Val	Trp	Pro	Ser	Arg	Ile	Gln	Pro	Ala	Val	Phe	Ala	Phe	Pro
				335					340					345
Cys	Ala	Thr	Leu	Ile	Thr	Val	Met	Leu	Ala	Phe	Ile	Met	Tyr	Met
				350					355					360
Thr	Leu	Arg	Asn	Ala	Thr	Gln	Gln	Lys	Asp	Met	Val	Glu	Asn	Pro
				365					370					375
Glu	Pro	Pro	Ser	Gly	Val	Arg	Cys	Cys	Cys	Gln	Met	Cys	Cys	Gly
				380					385					390
Pro	Phe	Leu	Leu	Glu	Thr	Pro	Ser	Glu	Tyr	Leu	Glu	Ile	Val	Arg
				395					400					405
Glu	Asn	His	Gly	Leu	Leu	Pro	Pro	Leu	Tyr	Lys	Ser	Val	Lys	Thr
				410					415					420

Tyr Thr Val

<210> 242
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 242
 catttcctta ccctggaccc agctcc 26

<210> 243
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 243
gaaaggccca cagcacatct ggcag 25

<210> 244
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 244
ccacgaccg agcaacttcc tcaagaccga cttgtttctc tacagc 46

<210> 245
<211> 485
<212> DNA
<213> Homo sapiens

<400> 245
gctcaagacc cagcagtggg acagccagac agacggcacg atggcactga 50
gctcccagat ctgggccgct tgcctcctgc tcctcctcct cctcgccagc 100
ctgaccagtg gctctgtttt cccacaacag acgggacaac ttgcagagct 150
gcaaccccag gacagagctg gagccagggc cagctggatg cccatgttcc 200
agaggcgaag gaggcgagac acccaacttcc ccatctgcat tttctgctgc 250
ggctgctgtc atcgatcaaa gtgtgggatg tgctgcaaga cgtagaacct 300
acctgccctg ccccgctccc ctcccttctc tatttattcc tgctgcccc 350
gaacataggt cttggaataa aatggctggg tcttttgttt tccccaaaaa 400
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 450
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 485

<210> 246
<211> 84
<212> PRT
<213> Homo sapiens

<400> 246
Met Ala Leu Ser Ser Gln Ile Trp Ala Ala Cys Leu Leu Leu Leu
1 5 10 15
Leu Leu Leu Ala Ser Leu Thr Ser Gly Ser Val Phe Pro Gln Gln
20 25 30
Thr Gly Gln Leu Ala Glu Leu Gln Pro Gln Asp Arg Ala Gly Ala
35 40 45
Arg Ala Ser Trp Met Pro Met Phe Gln Arg Arg Arg Arg Arg Asp
50 55 60
Thr His Phe Pro Ile Cys Ile Phe Cys Cys Gly Cys Cys His Arg
65 70 75

Ser Lys Cys Gly Met Cys Cys Lys Thr
80

<210> 247
<211> 2359
<212> DNA
<213> Homo sapiens

<400> 247
ctgtcaggaa ggaccatctg aaggctgcaa tttgttctta gggaggcagg 50
tgctggcctg gcctggatct tccaccatgt tctgtttgct gccttttgat 100
agcctgattg tcaaccttct gggcatctcc ctgactgtcc tcttcaccct 150
ccttctcggt ttcatcatag tgccagccat ttttgaggtc tcttttggtg 200
tccgcaaaact ctacatgaaa agtctgttaa aaatctttgc gtgggctacc 250
ttgagaatgg agcgaggagc caaggagaag aaccaccagc tttacaagcc 300
ctacaccaac ggaatcattg caaaggatcc cacttcacta gaagaagaga 350
tcaaagagat tcgtcgaagt ggtagtagta aggcctctgga caacactoca 400
gagttcgagc tctctgacat tttctacttt tgccggaaaag gaatggagac 450
cattatggat gatgagggtga caaagagatt ctgagcagaa gaactggagt 500
cctggaacct gctgagcaga accaattata acttcagta catcagcctt 550
cggctcacgg tctgtgggg gttaggagtg ctgattcggg actgctttct 600
gctgccgctc aggatagcac tggctttcac agggattagc cttctggtgg 650
tgggcacaac tgtggtggga tacttgccaa atgggagggt taaggaattc 700
atgagtaaac atgttcactt aatgtgttac cggatctgcg tgcgagcgt 750
gacagccatc atcacctacc atgacaggga aaacagacca agaaatggtg 800
gcatctgtgt ggccaatcat acctcaccga tcgatgtgat catcttggcc 850
agcgatggct attatgccat ggtgggtcaa gtgcacgggg gactcatggg 900
tgtgattcag agagccatgg tgaaggcctg cccacacgtc tggtttgagc 950
gctcggaagt gaaggatcgc cacctggtgg ctaagagact gactgaacat 1000
gtgcaagata aaagcaagct gcctatctc atcttcccag aaggaacctg 1050
catcaataat acatcggtga tgatgttcaa aaagggaagt tttgaaattg 1100
gagccacagt ttaccctgtt gctatcaagt atgacctca atttggcgat 1150
gccttctgga acagcagcaa atacgggatg gtgacgtacc tgctgcgaat 1200
gatgaccagc tgggccattg tctgcagcgt gtggtacctg cctcccatga 1250
ctagagagggc agatgaagat gctgtccagt ttgcgaatag ggtgaaatct 1300
gccattgccca ggcagggagg acttgtggac ctgctgtggg atgggggcct 1350

gaagagggag aaggtgaagg acacgttcaa ggaggagcag cagaagctgt 1400
acagcaagat gatcgtgggg aaccacaagg acaggagccg ctccctgagcc 1450
tgcctccagc tggctggggc caccgtgcgg ggtgccaaacg ggctcagagc 1500
tggagttgcc gccgccgccc ccactgctgt gtcctttcca gactccaggg 1550
ctccccgggc tgctctggat ccaggactc cggttttcgc cgagccgcag 1600
cgggatccct gtgcacccgg cgcagcctac ccttggtggt ctaaaccgat 1650
gctgctgggt gttgcgaccc aggacgagat gccttgtttc ttttacaata 1700
agtcgttga ggaatgccat taaagtgaac tccccacctt tgcacgctgt 1750
gcgggctgag tggttgggga gatgtggcca tggctctgtg ctagagatgg 1800
cgggtacaaga gtctgttatg caagcccgtg tgccagggat gtgctggggg 1850
cggccacccg ctctccagga aaggcacagc tgaggcactg tggctggctt 1900
cggcctcaac atcgccccca gccttgagc tctgcagaca tgataggaag 1950
gaaactgtca tctgcagggg ctttcagcaa aatgaagggt tagattttta 2000
tgctgctgct gatgggggta ctaaaggag gggaagaggc cagggtgggccc 2050
gotgactggg ccatggggag aacgtgtgtt cgtactccag gctaaccctg 2100
aactccccat gtgatgcgcg ctttgttgaa tgtgtgtctc ggtttcccca 2150
tctgtaatat gagtccgggg gaatggtggt gattcctacc tcacagggct 2200
gttggtgggga ttaaagtgtc gcgggtgagt gaaggacaca tcacgttcag 2250
tgtttcaagt acaggccac aaaacggggc acggcaggcc tgagctcaga 2300
gctgctgcac tgggctttgg atttgttctt gtgagtaaataaaaactggct 2350
ggtgaatga 2359

<210> 248
<211> 456
<212> PRT
<213> Homo sapiens

<400> 248
Met Phe Leu Leu Leu Pro Phe Asp Ser Leu Ile Val Asn Leu Leu
1 5 10 15
Gly Ile Ser Leu Thr Val Leu Phe Thr Leu Leu Leu Val Phe Ile
20 25 30
Ile Val Pro Ala Ile Phe Gly Val Ser Phe Gly Ile Arg Lys Leu
35 40 45
Tyr Met Lys Ser Leu Leu Lys Ile Phe Ala Trp Ala Thr Leu Arg
50 55 60
Met Glu Arg Gly Ala Lys Glu Lys Asn His Gln Leu Tyr Lys Pro
65 70 75

Tyr	Thr	Asn	Gly	Ile	Ile	Ala	Lys	Asp	Pro	Thr	Ser	Leu	Glu	Glu	80	85	90
Glu	Ile	Lys	Glu	Ile	Arg	Arg	Ser	Gly	Ser	Ser	Lys	Ala	Leu	Asp	95	100	105
Asn	Thr	Pro	Glu	Phe	Glu	Leu	Ser	Asp	Ile	Phe	Tyr	Phe	Cys	Arg	110	115	120
Lys	Gly	Met	Glu	Thr	Ile	Met	Asp	Asp	Glu	Val	Thr	Lys	Arg	Phe	125	130	135
Ser	Ala	Glu	Glu	Leu	Glu	Ser	Trp	Asn	Leu	Leu	Ser	Arg	Thr	Asn	140	145	150
Tyr	Asn	Phe	Gln	Tyr	Ile	Ser	Leu	Arg	Leu	Thr	Val	Leu	Trp	Gly	155	160	165
Leu	Gly	Val	Leu	Ile	Arg	Tyr	Cys	Phe	Leu	Leu	Pro	Leu	Arg	Ile	170	175	180
Ala	Leu	Ala	Phe	Thr	Gly	Ile	Ser	Leu	Leu	Val	Val	Gly	Thr	Thr	185	190	195
Val	Val	Gly	Tyr	Leu	Pro	Asn	Gly	Arg	Phe	Lys	Glu	Phe	Met	Ser	200	205	210
Lys	His	Val	His	Leu	Met	Cys	Tyr	Arg	Ile	Cys	Val	Arg	Ala	Leu	215	220	225
Thr	Ala	Ile	Ile	Thr	Tyr	His	Asp	Arg	Glu	Asn	Arg	Pro	Arg	Asn	230	235	240
Gly	Gly	Ile	Cys	Val	Ala	Asn	His	Thr	Ser	Pro	Ile	Asp	Val	Ile	245	250	255
Ile	Leu	Ala	Ser	Asp	Gly	Tyr	Tyr	Ala	Met	Val	Gly	Gln	Val	His	260	265	270
Gly	Gly	Leu	Met	Gly	Val	Ile	Gln	Arg	Ala	Met	Val	Lys	Ala	Cys	275	280	285
Pro	His	Val	Trp	Phe	Glu	Arg	Ser	Glu	Val	Lys	Asp	Arg	His	Leu	290	295	300
Val	Ala	Lys	Arg	Leu	Thr	Glu	His	Val	Gln	Asp	Lys	Ser	Lys	Leu	305	310	315
Pro	Ile	Leu	Ile	Phe	Pro	Glu	Gly	Thr	Cys	Ile	Asn	Asn	Thr	Ser	320	325	330
Val	Met	Met	Phe	Lys	Lys	Gly	Ser	Phe	Glu	Ile	Gly	Ala	Thr	Val	335	340	345
Tyr	Pro	Val	Ala	Ile	Lys	Tyr	Asp	Pro	Gln	Phe	Gly	Asp	Ala	Phe	350	355	360
Trp	Asn	Ser	Ser	Lys	Tyr	Gly	Met	Val	Thr	Tyr	Leu	Leu	Arg	Met	365	370	375
Met	Thr	Ser	Trp	Ala	Ile	Val	Cys	Ser	Val	Trp	Tyr	Leu	Pro	Pro	380	385	390

Met Thr Arg Glu Ala Asp Glu Asp Ala Val Gln Phe Ala Asn Arg
395 400 405

Val Lys Ser Ala Ile Ala Arg Gln Gly Gly Leu Val Asp Leu Leu
410 415 420

Trp Asp Gly Gly Leu Lys Arg Glu Lys Val Lys Asp Thr Phe Lys
425 430 435

Glu Glu Gln Gln Lys Leu Tyr Ser Lys Met Ile Val Gly Asn His
440 445 450

Lys Asp Arg Ser Arg Ser
455

<210> 249
<211> 1103
<212> DNA
<213> Homo sapiens

<400> 249
gcccctcgaa accaggactc cagcacctct ggtccccgcc tcacccggac 50
ccctggccct cagctctcct ccagggatgg cgctggcggc tttgatgatc 100
gcccctggca gcccggcct ccacacctgg caggcccagg ctgttccac 150
catcctgccc ctgggcctgg ctccagacac ctttgacgat acctatgtgg 200
gttgtgcaga ggagatggag gagaaggcag cccccctgct aaaggaggaa 250
atggcccacc atgccctgct gcgggaatcc tgggaggcag cccaggagac 300
ctgggaggac aagcgtcgag ggcttacctt gcccctggc ttcaaagccc 350
agaatggaat agccattatg gtctacacca actcatcgaa caccttgtac 400
tgggagttga atcaggccgt gcggacgggc ggaggctccc gggagctcta 450
catgaggcac tttcccttca aggccctgca tttctacctg atccgggccc 500
tgcagctgct gcgaggcagt gggggctgca gcaggggacc tggggaggtg 550
gtgttccgag gtgtgggcag ccttcgcttt gaaccaaga ggctggggga 600
ctctgtccgc ttgggccagt ttgcctccag ctccctggat aaggcagtgg 650
cccacagatt tggggagaag aggcggggct gtgtgtctgc gccaggggtg 700
cagctagggt cacaatctga gggggcctcc tctctgcccc cctggaagac 750
tctgtctttg gccctggag agttccagct ctcaggggtt gggccctgaa 800
agtccaacat ctgccactta ggagccctgg gaacgggtga cttcatatg 850
acgaagaggc acctccagca gccttgagaa gcaagaacat ggttccggac 900
ccagccctag cagccttctc cccaaccagg atgttggcct ggggaggcca 950
cagcagggtt gagggaaact tgctatgtga tggggacttc ctgggacaag 1000
caaggaaagt actgaggcag ccacttgatt gaacggtgtt gcaatgtgga 1050

gacatggagt tttattgagg tagctacgtg attaaatggt attgcagtgt 1100

gga 1103

<210> 250

<211> 240

<212> PRT

<213> Homo sapiens

<400> 250

Met	Ala	Leu	Ala	Ala	Leu	Met	Ile	Ala	Leu	Gly	Ser	Leu	Gly	Leu	
1				5					10					15	
His	Thr	Trp	Gln	Ala	Gln	Ala	Val	Pro	Thr	Ile	Leu	Pro	Leu	Gly	
			20						25					30	
Leu	Ala	Pro	Asp	Thr	Phe	Asp	Asp	Thr	Tyr	Val	Gly	Cys	Ala	Glu	
			35						40					45	
Glu	Met	Glu	Glu	Lys	Ala	Ala	Pro	Leu	Leu	Lys	Glu	Glu	Met	Ala	
				50					55					60	
His	His	Ala	Leu	Leu	Arg	Glu	Ser	Trp	Glu	Ala	Ala	Gln	Glu	Thr	
			65						70					75	
Trp	Glu	Asp	Lys	Arg	Arg	Gly	Leu	Thr	Leu	Pro	Pro	Gly	Phe	Lys	
			80						85					90	
Ala	Gln	Asn	Gly	Ile	Ala	Ile	Met	Val	Tyr	Thr	Asn	Ser	Ser	Asn	
			95						100					105	
Thr	Leu	Tyr	Trp	Glu	Leu	Asn	Gln	Ala	Val	Arg	Thr	Gly	Gly	Gly	
			110						115					120	
Ser	Arg	Glu	Leu	Tyr	Met	Arg	His	Phe	Pro	Phe	Lys	Ala	Leu	His	
			125						130					135	
Phe	Tyr	Leu	Ile	Arg	Ala	Leu	Gln	Leu	Leu	Arg	Gly	Ser	Gly	Gly	
			140						145					150	
Cys	Ser	Arg	Gly	Pro	Gly	Glu	Val	Val	Phe	Arg	Gly	Val	Gly	Ser	
			155						160					165	
Leu	Arg	Phe	Glu	Pro	Lys	Arg	Leu	Gly	Asp	Ser	Val	Arg	Leu	Gly	
			170						175					180	
Gln	Phe	Ala	Ser	Ser	Ser	Leu	Asp	Lys	Ala	Val	Ala	His	Arg	Phe	
			185						190					195	
Gly	Glu	Lys	Arg	Arg	Gly	Cys	Val	Ser	Ala	Pro	Gly	Val	Gln	Leu	
			200						205					210	
Gly	Ser	Gln	Ser	Glu	Gly	Ala	Ser	Ser	Leu	Pro	Pro	Trp	Lys	Thr	
			215						220					225	
Leu	Leu	Leu	Ala	Pro	Gly	Glu	Phe	Gln	Leu	Ser	Gly	Val	Gly	Pro	
			230						235					240	

<210> 251

<211> 50

<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 251
ccaccacctg gaggtcctgc agttgggcag gaactccatc cggcagattg 50

<210> 252
<211> 1076
<212> DNA
<213> Homo sapiens

<400> 252
gtggcttcat ttcagtggct gacttccaga gagcaatatg gctgggtccc 50
caacatgcct caccctcatc tatatccttt ggcagctcac agggtcagca 100
gcctctggac ccgtgaaaga gctggtcggt tccgttggtg gggccgtgac 150
tttccccctg aagtccaaag taaagcaagt tgactctatt gtctggacct 200
tcaacacaac ccctcttgtc accatacagc cagaaggggg cactatcata 250
gtgacccaaa atcgtaatat ggagagagta gacttcccag atggaggcta 300
ctccctgaag ctgagcaaac tgaagaagaa tgactcaggg atctactatg 350
tggggatata cagctcatca ctccagcagc cctccacca ggagtacgtg 400
ctgcatgtct acgagcacct gtcaaagcct aaagtcacca tgggtctgca 450
gagcaataag aatggcacct gtgtgaccaa tctgacatgc tgcattgaac 500
atggggaaga ggatgtgatt tatacctgga aggccctggg gcaagcagcc 550
aatgagtcct ataatgggtc catcctcccc atctcctgga gatggggaga 600
aagtgatatg accttcatct gcgttgccag gaaccctgtc agcagaaaact 650
tctcaagccc catccttgcc aggaagctct gtgaagggtc tgctgatgac 700
ccagattcct ccattggtcct cctgtgtctc ctgttggtgc cctcctgct 750
cagtctcttt gtactggggc tatttctttg gtttctgaag agagagagac 800
aagaagagta cattgaagag aagaagagag tggacatttg tcgggaaact 850
cctaacatat gccccattc tggagagaac acagagtacg acacaatccc 900
tcacactaat agaacaatcc taaaggaaga tccagcaaact acggtttact 950
ccactgtgga aataccgaaa aagatggaaa atccccactc actgctcacg 1000
atgccagaca caccaaggct atttgcttat gagaatgtta tctagacagc 1050
agtgcactcc cctaagtctc tgctca 1076

<210> 253
<211> 335
<212> PRT
<213> Homo sapiens

<400> 253
Met Ala Gly Ser Pro Thr Cys Leu Thr Leu Ile Tyr Ile Leu Trp

1	5	10	15
Gln Leu Thr Gly Ser	Ala Ala Ser Gly	Pro Val Lys Glu Leu Val	
	20	25	30
Gly Ser Val Gly Gly	Ala Val Thr Phe	Pro Leu Lys Ser Lys Val	
	35	40	45
Lys Gln Val Asp Ser	Ile Val Trp Thr	Phe Asn Thr Thr Pro Leu	
	50	55	60
Val Thr Ile Gln Pro	Glu Gly Gly Thr	Ile Ile Val Thr Gln Asn	
	65	70	75
Arg Asn Arg Glu Arg	Val Asp Phe Pro	Asp Gly Gly Tyr Ser Leu	
	80	85	90
Lys Leu Ser Lys Leu	Lys Lys Asn Asp	Ser Gly Ile Tyr Tyr Val	
	95	100	105
Gly Ile Tyr Ser Ser	Ser Leu Gln Gln	Pro Ser Thr Gln Glu Tyr	
	110	115	120
Val Leu His Val Tyr	Glu His Leu Ser	Lys Pro Lys Val Thr Met	
	125	130	135
Gly Leu Gln Ser Asn	Lys Asn Gly Thr	Cys Val Thr Asn Leu Thr	
	140	145	150
Cys Cys Met Glu His	Gly Glu Glu Asp	Val Ile Tyr Thr Trp Lys	
	155	160	165
Ala Leu Gly Gln Ala	Ala Asn Glu Ser	His Asn Gly Ser Ile Leu	
	170	175	180
Pro Ile Ser Trp Arg	Trp Gly Glu Ser	Asp Met Thr Phe Ile Cys	
	185	190	195
Val Ala Arg Asn Pro	Val Ser Arg Asn	Phe Ser Ser Pro Ile Leu	
	200	205	210
Ala Arg Lys Leu Cys	Glu Gly Ala Ala	Asp Asp Pro Asp Ser Ser	
	215	220	225
Met Val Leu Leu Cys	Leu Leu Leu Val	Pro Leu Leu Leu Ser Leu	
	230	235	240
Phe Val Leu Gly Leu	Phe Leu Trp Phe	Leu Lys Arg Glu Arg Gln	
	245	250	255
Glu Glu Tyr Ile Glu	Glu Lys Lys Arg	Val Asp Ile Cys Arg Glu	
	260	265	270
Thr Pro Asn Ile Cys	Pro His Ser Gly	Glu Asn Thr Glu Tyr Asp	
	275	280	285
Thr Ile Pro His Thr	Asn Arg Thr Ile	Leu Lys Glu Asp Pro Ala	
	290	295	300
Asn Thr Val Tyr Ser	Thr Val Glu Ile	Pro Lys Lys Met Glu Asn	
	305	310	315
Pro His Ser Leu Leu	Thr Met Pro Asp	Thr Pro Arg Leu Phe Ala	

320

325

330

Tyr Glu Asn Val Ile
335

<210> 254
<211> 1053
<212> DNA
<213> Homo sapiens

<400> 254
ctggttcccc aacatgcctc accctcatct atatcctttg gcagctcaca 50
gggtcagcag cctctggacc cgtgaaagag ctggctgggtt ccgttggtgg 100
ggccgtgact ttccccctga agtccaaagt aaagcaagtt gactctattg 150
tctggacctt caacacaacc cctcttgta ccatacagcc agaagggggc 200
actatcatag tgacccaaaa tcgtaatagg gagagagtag acttcccaga 250
tggaggctac tccctgaagc tcagcaaact gaagaagaat gactcagga 300
tctactatgt ggggatatac agctcatcac tccagcagcc ctccaccag 350
gagtacgtgc tgcattgtcta cgagcacctg tcaaagccta aagtcaccat 400
gggtctgcag agcaataaga atggcacctg tgtgaccaat ctgacatgct 450
gcatggaaca tggggaagag gatgtgattt atacctggaa ggccctgggg 500
caagcagcca atgagtccca taatgggtcc atcctcccca tctcctggag 550
atggggagaa agtgatatga ccttcatctg cgttgccagg aacctgtca 600
gcagaaactt ctcaagcccc atccttgcca ggaagctctg tgaagggtgct 650
gctgatgacc cagattcctc catggtcctc ctgtgtctcc tgttggtgcc 700
cctcctgctc agtctctttg tactggggct atttctttgg tttctgaaga 750
gagagagaca agaagagtac attgaagaga agaagagagt ggacatttgt 800
cgggaaactc ctaacatatg ccccatctct ggagagaaca cagagtacga 850
cacaatccct cacactaata gaacaatcct aaaggaagat ccagcaaata 900
cggtttactc cactgtggaa ataccgaaaa agatggaaaa tccccactca 950
ctgctcacga tgccagacac accaaggcta tttgcctatg agaatgttat 1000
ctagacagca gtgcactccc ctaagtctct gctcaaaaaa aaaaaaaaaa 1050
aaa 1053

<210> 255
<211> 860
<212> DNA
<213> Homo sapiens

<400> 255
gaaagacgtg gtcctgacag acagacaatc ctattcccta ccaaaatgaa 50

gatgctgctg ctgctgtgtt tgggactgac cctagtctgt gtccatgcag 100
aagaagctag ttctacggga aggaacttta atgtagaaaa gattaatggg 150
gaatggcata ctattatcct ggcctctgac aaaagagaaa agatagaaga 200
acatggcaac tttagacttt ttctggagca aatocatgtc ttggagaatt 250
ccttagttct taaagtccat actgtaagag atgaagagtg ctccgaatta 300
tctatgggtg ctgacaaaac agaaaaggct ggtgaatatt ctgtgacgta 350
tgatggattc aatacattta ctatacctaa gacagactat gataactttc 400
ttatggctca cctcattaac gaaaaggatg gggaaacctt ccagctgatg 450
gggctctatg gccgagaacc agatttgagt tcagacatca aggaaagggt 500
tgcacaacta tgtgaggagc atggaatcct tagagaaaat atcattgacc 550
tatccaatgc caatcgctgc ctccaggccc gagaatgaag aatggcctga 600
gcctccagtg ttgagtggac acttctcacc aggactccac catcatccct 650
tcctatccat acagcatccc cagtataaat tctgtgatct gcattccatc 700
ctgtctcact gagaagtcca attocagtct atcaacatgt tacctaggat 750
acctcatcaa gaatcaaaga cttcttttaa tttctctttg atacaccctt 800
gacaattttt catgaaatta ttctctttcc tgttcaataa atgattaccc 850
ttgcacttaa 860

<210> 256
<211> 180
<212> PRT
<213> Homo sapiens

<400> 256
Met Lys Met Leu Leu Leu Leu Cys Leu Gly Leu Thr Leu Val Cys
1 5 10 15
Val His Ala Glu Glu Ala Ser Ser Thr Gly Arg Asn Phe Asn Val
20 25 30
Glu Lys Ile Asn Gly Glu Trp His Thr Ile Ile Leu Ala Ser Asp
35 40 45
Lys Arg Glu Lys Ile Glu Glu His Gly Asn Phe Arg Leu Phe Leu
50 55 60
Glu Gln Ile His Val Leu Glu Asn Ser Leu Val Leu Lys Val His
65 70 75
Thr Val Arg Asp Glu Glu Cys Ser Glu Leu Ser Met Val Ala Asp
80 85 90
Lys Thr Glu Lys Ala Gly Glu Tyr Ser Val Thr Tyr Asp Gly Phe
95 100 105
Asn Thr Phe Thr Ile Pro Lys Thr Asp Tyr Asp Asn Phe Leu Met
110 115 120

[illegible]

<211> 766

<213> Homo sapiens

ggctcgagcg	tttctgagcc	aggggtgacc	atgacctgct	gcgaagggatg	50
gacatcctgc	aatggattca	gcctgctggt	tctactgctg	ttaggagtag	100
ttctcaatgc	gatacctcta	attgtcagct	tagttgagga	agaccaattt	150
tctcaaaacc	ccatctcttg	ctttgagtgg	tggttcccag	gaattatagg	200
agcaggtctg	atggccattc	cagcaacaac	aatgtccttg	acagcaagaa	250
aaagagcgtg	ctgcaacaac	agaactggaa	tgtttctttc	atcatttttc	300
agtgtgatca	cagtcattgg	tgctctgtat	tgcattgctga	tatccatcca	350
ggctctctta	aaaggtcctc	tcatgtgtaa	ttctccaagc	aacagtaatg	400
ccaattgtga	attttcattg	aaaaacatca	gtgacattca	tccagaatcc	450
ttcaacttgc	agtggttttt	caatgactct	tgtgcacctc	ctactgggtt	500
caataaacc	accagtaacg	acaccatggc	gagtggctgg	agagcatcta	550
gtttccactt	cgattctgaa	gaaaacaaac	ataggcttat	ccacttctca	600
gtatttttag	gtctattgct	tgttggaatt	ctggaggtcc	tgtttgggct	650
cagtcagata	gtcatcggtt	tccttggctg	tctgtgtgga	gtctctaagc	700
gaagaagtca	aattgtgtag	tttaatggga	ataaaatgta	agtatcagta	750
gtttgaaaaa	aaaaaa	766			

<211> 229

<213> Homo sapiens

Met	Thr	Cys	Cys	Glu	Gly	Trp	Thr	Ser	Cys	Asn	Gly	Phe	Ser	Leu
1				5					10					15
Leu	Val	Leu	Leu	Leu	Leu	Gly	Val	Val	Leu	Asn	Ala	Ile	Pro	Leu
				20					25					30
Ile	Val	Ser	Leu	Val	Glu	Glu	Asp	Gln	Phe	Ser	Gln	Asn	Pro	Ile

	35	40	45
Ser Cys Phe Glu Trp Trp Phe Pro Gly Ile Ile Gly Ala Gly Leu	50	55	60
Met Ala Ile Pro Ala Thr Thr Met Ser Leu Thr Ala Arg Lys Arg	65	70	75
Ala Cys Cys Asn Asn Arg Thr Gly Met Phe Leu Ser Ser Phe Phe	80	85	90
Ser Val Ile Thr Val Ile Gly Ala Leu Tyr Cys Met Leu Ile Ser	95	100	105
Ile Gln Ala Leu Leu Lys Gly Pro Leu Met Cys Asn Ser Pro Ser	110	115	120
Asn Ser Asn Ala Asn Cys Glu Phe Ser Leu Lys Asn Ile Ser Asp	125	130	135
Ile His Pro Glu Ser Phe Asn Leu Gln Trp Phe Phe Asn Asp Ser	140	145	150
Cys Ala Pro Pro Thr Gly Phe Asn Lys Pro Thr Ser Asn Asp Thr	155	160	165
Met Ala Ser Gly Trp Arg Ala Ser Ser Phe His Phe Asp Ser Glu	170	175	180
Glu Asn Lys His Arg Leu Ile His Phe Ser Val Phe Leu Gly Leu	185	190	195
Leu Leu Val Gly Ile Leu Glu Val Leu Phe Gly Leu Ser Gln Ile	200	205	210
Val Ile Gly Phe Leu Gly Cys Leu Cys Gly Val Ser Lys Arg Arg	215	220	225
Ser Gln Ile Val			

<210> 259
 <211> 434
 <212> DNA
 <213> Homo sapiens

<400> 259
 gtcgaatcca aatcactcat tgtgaaagct gagctcacag ccgaataagc 50
 caccatgagg ctgtcagtgt gtctcctgat ggtctcgctg gccctttgct 100
 gctaccaggc ccatgctctt gtctgcccag ctgttgcttc tgagatcaca 150
 gtcttcttat tcttaagtga cgctgcggtg aacctccaag ttgccaaact 200
 taatccacct ccagaagctc ttgcagccaa gttggaagtg aagcactgca 250
 ccgatcagat atctttttaag aaacgactct cattgaaaaa gtcctgggtg 300
 aaatagtga aaaatgtggt gtgtgacatg taaaaatgct caacctggtt 350
 tccaaagtct ttcaacgaca cctgatctt cactaaaaat tgtaaagggt 400

tcaacacgtt gctttaataa atcacttgcc ctgc 434

<210> 260

<211> 83

<212> PRT

<213> Homo sapiens

<400> 260

Met Arg Leu Ser Val Cys Leu Leu Met Val Ser Leu Ala Leu Cys
1 5 10 15

Cys Tyr Gln Ala His Ala Leu Val Cys Pro Ala Val Ala Ser Glu
20 25 30

Ile Thr Val Phe Leu Phe Leu Ser Asp Ala Ala Val Asn Leu Gln
35 40 45

Val Ala Lys Leu Asn Pro Pro Pro Glu Ala Leu Ala Ala Lys Leu
50 55 60

Glu Val Lys His Cys Thr Asp Gln Ile Ser Phe Lys Lys Arg Leu
65 70 75

Ser Leu Lys Lys Ser Trp Trp Lys
80

<210> 261

<211> 636

<212> DNA

<213> Homo sapiens

<400> 261

atccgttctc tgcgctgcc a gctcaggtga gccctcgcca aggtgacctc 50

gcaggacact ggtgaaggag cagtgaggaa cctgcagagt cacacagttg 100

ctgaccaatt gagctgtgag cctggagcag atccgtgggc tgcagacccc 150

cgccccagtg cctctcccc tgcagccctg cccctcgaac tgtgacatgg 200

agagagtga cctggccctt ctctactgg caggcctgac tgccttgga 250

gccaatgacc catttgccaa taaagacgat cccttctact atgactggaa 300

aaacctgcag ctgagcggac tgatctgcgg agggctcctg gccattgctg 350

ggatcgcggc agttctgagt ggcaaatgca aatacaagag cagccagaag 400

cagcacagtc ctgtacctga gaaggccatc ccactcatca ctccaggctc 450

tgccactact tgctgagcac aggactggcc tccagggatg gcctgaagcc 500

taacactggc cccagcacc tcctcccctg ggaggcctta tcctcaagga 550

aggacttctc tccaaggga ggctgttagg cccctttctg atcaggaggc 600

ttctttatga attaaactcg cccaccacc ccctca 636

<210> 262

<211> 89

<212> PRT

<213> Homo sapiens

<400> 262

Met Glu Arg Val Thr Leu Ala Leu Leu Leu Leu Ala Gly Leu Thr
1 5 10 15

Ala Leu Glu Ala Asn Asp Pro Phe Ala Asn Lys Asp Asp Pro Phe
20 25 30

Tyr Tyr Asp Trp Lys Asn Leu Gln Leu Ser Gly Leu Ile Cys Gly
35 40 45

Gly Leu Leu Ala Ile Ala Gly Ile Ala Ala Val Leu Ser Gly Lys
50 55 60

Cys Lys Tyr Lys Ser Ser Gln Lys Gln His Ser Pro Val Pro Glu
65 70 75

Lys Ala Ile Pro Leu Ile Thr Pro Gly Ser Ala Thr Thr Cys
80 85

<210> 263

<211> 1676

<212> DNA

<213> Homo sapiens

<400> 263

ggagaagagg ttgtgtggga caagctgctc ccgacagaag gatgtcgtg 50

ctgagcctgc cctggctggg cctcagaccg gtggcaatgt ccccatggct 100

actcctgctg ctggttgtgg gctcctggct actcgcccgc atcctggctt 150

ggacctatgc cttctataac aactgccgcc ggctccagtg tttccacag 200

ccccaaaac ggaactggtt ttgggggtcac ctgggcctga tcaactcctac 250

agaggagggc ttgaaggact cgaccagat gtcggccacc tattcccagg 300

gctttacggt atggctgggt cccatcatcc ccttcatcgt tttatgccac 350

cctgacacca tccggtctat caccaatgcc tcagctgcca ttgcacccaa 400

ggataatctc ttcacaggt tcctgaagcc ctggctggga gaagggatac 450

tgtgtagtgg cggtgacaag tggagccgcc accgtcggat gctgacgccc 500

gccttccatt tcaacatcct gaagtcctat ataacgatct tcaacaagag 550

tgcaaacatc atgcttgaca agtggcagca cctggcctca gagggcagca 600

gtcgtctgga catgtttgag cacatcagcc tcatgacctt ggacagtcta 650

cagaaatgca tcttcagctt tgacagccat tgtcaggaga ggcccagtga 700

atatattgcc accatcttgg agctcagtg ccttgtagag aaaagaagcc 750

agcatatcct ccagcacatg gactttctgt attacctctc ccatgacggg 800

cggcgcttcc acagggcctg ccgcctggtg catgacttca cagacgctgt 850

catccgggag cggcgctgca cctcccccac tcagggtatt gatgattttt 900

tcaaagacaa agccaagtcc aagactttgg atttcattga tgtgcttctg 950

ctgagcaagg atgaagatgg gaaggcattg tcagatgagg atataagagc 1000
agaggctgac accttcatgt ttggaggcca tgacaccacg gccagtggcc 1050
tctcctgggt cctgtacaac cttgcgaggc acccagaata ccaggagcgc 1100
tgccgacagg aggtgcaaga gcttctgaag gaccgogatc ctaaagagat 1150
tgaatgggac gacctggccc agctgccctt cctgaccatg tgcgtgaagg 1200
agagcctgag gttacatccc ccagctccct tcatotcccg atgctgcacc 1250
caggacattg ttctcccaga tggccgagtc atccccaaag gcattacctg 1300
cctcatcgat attatagggg tccatcaciaa cccaactgtg tggccggatc 1350
ctgaggtcta cgacccttc cgctttgacc cagagaacag caaggggagg 1400
tcacctctgg cttttattcc tttctccgca gggcccagga actgcatcgg 1450
gcaggcggtc gccatggcgg agatgaaagt ggtcctggcg ttgatgctgc 1500
tgcaattccg gttcctgccg gaccacactg agccccgcag gaagctggaa 1550
ttgatcatgc gcgccgagg cgggctttgg ctgogggtgg agcccctgaa 1600
tgtaggcttg cagtgacttt ctgaccatc cacctgtttt tttgcagatt 1650
gtcatgaata aaacggtgct gtcaaaa 1676

<210> 264
<211> 524
<212> PRT
<213> Homo sapiens

<400> 264
Met Ser Leu Leu Ser Leu Pro Trp Leu Gly Leu Arg Pro Val Ala
1 5 10 15
Met Ser Pro Trp Leu Leu Leu Leu Val Val Gly Ser Trp Leu
20 25 30
Leu Ala Arg Ile Leu Ala Trp Thr Tyr Ala Phe Tyr Asn Asn Cys
35 40 45
Arg Arg Leu Gln Cys Phe Pro Gln Pro Pro Lys Arg Asn Trp Phe
50 55 60
Trp Gly His Leu Gly Leu Ile Thr Pro Thr Glu Glu Gly Leu Lys
65 70 75
Asp Ser Thr Gln Met Ser Ala Thr Tyr Ser Gln Gly Phe Thr Val
80 85 90
Trp Leu Gly Pro Ile Ile Pro Phe Ile Val Leu Cys His Pro Asp
95 100 105
Thr Ile Arg Ser Ile Thr Asn Ala Ser Ala Ala Ile Ala Pro Lys
110 115 120
Asp Asn Leu Phe Ile Arg Phe Leu Lys Pro Trp Leu Gly Glu Gly
125 130 135

Ile	Leu	Leu	Ser	Gly	Gly	Asp	Lys	Trp	Ser	Arg	His	Arg	Arg	Met	
				140					145					150	
Leu	Thr	Pro	Ala	Phe	His	Phe	Asn	Ile	Leu	Lys	Ser	Tyr	Ile	Thr	
				155					160					165	
Ile	Phe	Asn	Lys	Ser	Ala	Asn	Ile	Met	Leu	Asp	Lys	Trp	Gln	His	
				170					175					180	
Leu	Ala	Ser	Glu	Gly	Ser	Ser	Arg	Leu	Asp	Met	Phe	Glu	His	Ile	
				185					190					195	
Ser	Leu	Met	Thr	Leu	Asp	Ser	Leu	Gln	Lys	Cys	Ile	Phe	Ser	Phe	
				200					205					210	
Asp	Ser	His	Cys	Gln	Glu	Arg	Pro	Ser	Glu	Tyr	Ile	Ala	Thr	Ile	
				215					220					225	
Leu	Glu	Leu	Ser	Ala	Leu	Val	Glu	Lys	Arg	Ser	Gln	His	Ile	Leu	
				230					235					240	
Gln	His	Met	Asp	Phe	Leu	Tyr	Tyr	Leu	Ser	His	Asp	Gly	Arg	Arg	
				245					250					255	
Phe	His	Arg	Ala	Cys	Arg	Leu	Val	His	Asp	Phe	Thr	Asp	Ala	Val	
				260					265					270	
Ile	Arg	Glu	Arg	Arg	Arg	Thr	Leu	Pro	Thr	Gln	Gly	Ile	Asp	Asp	
				275					280					285	
Phe	Phe	Lys	Asp	Lys	Ala	Lys	Ser	Lys	Thr	Leu	Asp	Phe	Ile	Asp	
				290					295					300	
Val	Leu	Leu	Leu	Ser	Lys	Asp	Glu	Asp	Gly	Lys	Ala	Leu	Ser	Asp	
				305					310					315	
Glu	Asp	Ile	Arg	Ala	Glu	Ala	Asp	Thr	Phe	Met	Phe	Gly	Gly	His	
				320					325					330	
Asp	Thr	Thr	Ala	Ser	Gly	Leu	Ser	Trp	Val	Leu	Tyr	Asn	Leu	Ala	
				335					340					345	
Arg	His	Pro	Glu	Tyr	Gln	Glu	Arg	Cys	Arg	Gln	Glu	Val	Gln	Glu	
				350					355					360	
Leu	Leu	Lys	Asp	Arg	Asp	Pro	Lys	Glu	Ile	Glu	Trp	Asp	Asp	Leu	
				365					370					375	
Ala	Gln	Leu	Pro	Phe	Leu	Thr	Met	Cys	Val	Lys	Glu	Ser	Leu	Arg	
				380					385					390	
Leu	His	Pro	Pro	Ala	Pro	Phe	Ile	Ser	Arg	Cys	Cys	Thr	Gln	Asp	
				395					400					405	
Ile	Val	Leu	Pro	Asp	Gly	Arg	Val	Ile	Pro	Lys	Gly	Ile	Thr	Cys	
				410					415					420	
Leu	Ile	Asp	Ile	Ile	Gly	Val	His	His	Asn	Pro	Thr	Val	Trp	Pro	
				425					430					435	
Asp	Pro	Glu	Val	Tyr	Asp	Pro	Phe	Arg	Phe	Asp	Pro	Glu	Asn	Ser	
				440					445					450	

Lys Gly Arg Ser Pro Leu Ala Phe Ile Pro Phe Ser Ala Gly Pro
455 460 465

Arg Asn Cys Ile Gly Gln Ala Phe Ala Met Ala Glu Met Lys Val
470 475 480

Val Leu Ala Leu Met Leu Leu His Phe Arg Phe Leu Pro Asp His
485 490 495

Thr Glu Pro Arg Arg Lys Leu Glu Leu Ile Met Arg Ala Glu Gly
500 505 510

Gly Leu Trp Leu Arg Val Glu Pro Leu Asn Val Gly Leu Gln
515 520

<210> 265
<211> 584
<212> DNA
<213> Homo sapiens

<400> 265
caacagaagc caagaaggaa gccgtctatc ttgtggcgat catgtataag 50
ctggcctcct gctgtttgct tttcacagga ttcttaaatac ctctcttatac 100
tcttcctctc cttgactcca gggaaatatac ctttcaactc tcagcacctc 150
atgaagacgc gcgcttaact ccggaggagc tagaaagagc ttcccttcta 200
cagatattgc cagagatgct ggggtgcagaa agaggggata ttctcaggaa 250
agcagactca agtaccaaca tttttaaccc aagaggaaat ttgagaaagt 300
ttcaggattt ctctggacaa gatacctaaca ttttactgag tcatcttttg 350
gccagaatct ggaaaccata caagaaacgt gagactcctg attgcttctg 400
gaaataactgt gtctgaagtg aaataagcat ctgttagtca gctcagaaac 450
acctatctta gaatatgaaa aataacacaa tgcttgattt gaaaacagtg 500
tggagaaaaa ctaggcaaac tacaccctgt tcattgttac ctggaaaata 550
aatcctctat gttttgcaca aaaaaaaaaa aaaa 584

<210> 266
<211> 124
<212> PRT
<213> Homo sapiens

<400> 266
Met Tyr Lys Leu Ala Ser Cys Cys Leu Leu Phe Thr Gly Phe Leu
1 5 10 15
Asn Pro Leu Leu Ser Leu Pro Leu Leu Asp Ser Arg Glu Ile Ser
20 25 30
Phe Gln Leu Ser Ala Pro His Glu Asp Ala Arg Leu Thr Pro Glu
35 40 45
Glu Leu Glu Arg Ala Ser Leu Leu Gln Ile Leu Pro Glu Met Leu
50 55 60

Figure 1 consists of 11 subplots, labeled (a) through (k), arranged in a single column. Each subplot shows a 2D plot of a wave function or probability density in a different plane (x-y, x-z, or y-z) at a specific time. The plots show the spatial distribution of the wave function, with some subplots showing interference patterns or localized states. The axes are labeled with coordinates and time values.

<400>	267					
gaacattttt	agttcccaag	gaatgtacat	cagccccacg	gaagctaggc	50	
cacctctggg	atgggggttg	tggtttaaaa	caaacgccag	tcctcctata	100	
taaggacctg	acagccacca	ggcaccacct	ccgccaggaa	ctgcaggccc	150	
acctgtctgc	aaccagctg	aggccatgcc	ctcccagggy	accgtctgca	200	
gcctcctgct	cctcggcatg	ctctggctgg	acttggccat	ggcagggtcc	250	
agcttcctga	gccctgaaca	ccagagagtc	cagcagagaa	aggagtcgaa	300	
gaagccacca	gccaagctgc	agccccgagc	tctagcaggc	tggctccgcc	350	
cggaagatgg	aggtcaagca	gaaggggcag	aggatgaact	ggaagtccgg	400	
ttcaacgccc	cctttgatgt	tggaatcaag	ctgtcagggg	ttcagtagca	450	
gcagcacagc	caggccctgg	ggaagtttct	tcaggacatc	ctctgggaag	500	
aggccaaaga	ggccccagcc	gacaagtgat	cgcccacaag	ccttactcac	550	
ctctctctaa	gtttagaagc	gctcatctgg	cttttcgctt	gcttctgcag	600	
caactcccac	gactgttgta	caagctcagg	aggcgaataa	atgttcaaac	650	
tqta	654					

```

<400> 268
Met  Pro  Ser  Pro  Gly  Thr  Val  Cys  Ser  Leu  Leu  Leu  Leu  Gly  Met
   1          5          10          15

Leu  Trp  Leu  Asp  Leu  Ala  Met  Ala  Gly  Ser  Ser  Phe  Leu  Ser  Pro
   20          25          30

Glu  His  Gln  Arg  Val  Gln  Gln  Arg  Lys  Glu  Ser  Lys  Lys  Pro  Pro
   35          40          45

```

Ala	Lys	Leu	Gln	Pro	Arg	Ala	Leu	Ala	Gly	Trp	Leu	Arg	Pro	Glu
				50					55					60
Asp	Gly	Gly	Gln	Ala	Glu	Gly	Ala	Glu	Asp	Glu	Leu	Glu	Val	Arg
				65					70					75
Phe	Asn	Ala	Pro	Phe	Asp	Val	Gly	Ile	Lys	Leu	Ser	Gly	Val	Gln
				80					85					90
Tyr	Gln	Gln	His	Ser	Gln	Ala	Leu	Gly	Lys	Phe	Leu	Gln	Asp	Ile
				95					100					105
Leu	Trp	Glu	Glu	Ala	Lys	Glu	Ala	Pro	Ala	Asp	Lys			
				110					115					

<210> 269
 <211> 1332
 <212> DNA
 <213> Homo sapiens

<400> 269
 cggccacagc tggcatgctc tgcctgatcg ccatacctgct gtatgtcctc 50
 gtccagtacc tcgtgaaccc cggggtgctc cgcacggacc ccagatgtca 100
 agaatatgaa cacgtggctg ctgttcctcc ccctgttccc ggtgcaggtg 150
 cagaccctga tagtcgtgat catcgggatg ctogtgctcc tgctggactt 200
 tcttggttg gtgcacctgg gccagctgct catcttcac atctacctga 250
 gtatgtcccc caccctaagc ccccgatccc cccaaggctg ggtggtcaga 300
 gctgctcatc ttacacctct acttgagtat gtccctaacc ctgagcccc 350
 cacgcctggg gccagagtct ttgtcccccg tgtgcgcatg tgttcagggt 400
 cagcctctcc cagaagtgag atcatggaca aaaagggcaa atcacaggaa 450
 gaaattaaat ccatgaggac ccagcaggcc cagcaagaag ctgaactcac 500
 gccgagacct gcaggagtgg tgccagggtg ttgaagtaac aagtttaaaa 550
 tgttcagaga caatggaatg gaatctatta ggcaagaaca ggacattatg 600
 aaataaggac aggtggactt ccaaaaacac aagtagaat tctaacaatg 650
 aaatatatta caggcaggtc acccactaac caaacaactg aagcgagagc 700
 tgtggtcttg cttggtctca cagtgggcac agcggtaggc ggtcagtcac 750
 gttgctgaac gacggagggt aaactcccca gccccaagaa aacctgtgtt 800
 ggaagtaaca acaacctccc tgctcctggc accagccgtt ttggtcatgg 850
 tgggccagct gcaaagcgtc ttccattctc tgggcagtgg tggccccgag 900
 gctgtggcct ctgaggggtt ttctgtggac acgggcagca gagtgtgtcc 950
 aggccagccc ccaagaatgc cctgctcctg acagcttggc caaccctgg 1000
 tcagggcaga gggagttggg tgggtcaggc tctgggtcct cctccatctc 1050

cagagcatcc cctgcctgca gttgtggcaa gaacgcccag ctcagaatga 1100
 acacacccca ccaagagcct ccttggttcat aaccacaggt taccctacaa 1150
 accactgtcc ccacacaacc ctgggggatgt tttaaaacac acacctctaa 1200
 cgcatatctt acagtcactg ttgtcttgcc tgagggttga atttttttta 1250
 atgaaagtgc aatgaaaatc actggattaa atcctacgga cacagagctg 1300
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa 1332

<210> 270
 <211> 142
 <212> PRT
 <213> Homo sapiens

<400> 270
 Met Asn Thr Trp Leu Leu Phe Leu Pro Leu Phe Pro Val Gln Val
 1 5 10 15
 Gln Thr Leu Ile Val Val Ile Ile Gly Met Leu Val Leu Leu Leu
 20 25 30
 Asp Phe Leu Gly Leu Val His Leu Gly Gln Leu Leu Ile Phe His
 35 40 45
 Ile Tyr Leu Ser Met Ser Pro Thr Leu Ser Pro Arg Ser Pro Gln
 50 55 60
 Gly Trp Val Val Arg Ala Ala His Leu Thr Pro Leu Leu Glu Tyr
 65 70 75
 Val Pro Asn Pro Glu Pro Pro Thr Pro Gly Ala Arg Val Phe Val
 80 85 90
 Pro Arg Val Arg Met Cys Ser Gly Ser Ala Ser Pro Arg Ser Glu
 95 100 105
 Ile Met Asp Lys Lys Gly Lys Ser Gln Glu Glu Ile Lys Ser Met
 110 115 120
 Arg Thr Gln Gln Ala Gln Gln Glu Ala Glu Leu Thr Pro Arg Pro
 125 130 135
 Ala Gly Val Val Pro Gly Ala
 140

<210> 271
 <211> 1484
 <212> DNA
 <213> Homo sapiens

<400> 271
 ggagtgacaga tggcatcctt cggtttcttcc agacaagctg caagacgctg 50
 accatggcca agatggagct ctccaaggcc ttctctggcc agcggacact 100
 cctatctgcc atcctcagca tgctatcact cagcttctcc acaacatccc 150
 tgctcagcaa ctactggttt gtgggcacac agaaggtgcc caagcccctg 200
 tgcgagaaaag gtctggcagc caagtgcttt gacatgccag tgtccctgga 250

tggagatacc aacacatcca cccaggaggt ggtacaatac aactgggaga 300
 ctgggggatga ccggttctcc ttccggagct tccggagtgg catgtggcta 350
 tctgtgagg aaactgtgga agaaccaggg gagaggtgcc gaagtttcat 400
 tgaacttaca ccaccagcca agagaggtga gaaaggacta ctggaatttg 450
 ccacgttgca aggcccatgt caccctactc tccgatttgg agggaagcgg 500
 ttgatggaga aggttccct cccctccct cccttggggc tttgtggcaa 550
 aaatcctatg gttatccctg ggaacgcaga tcacctacat cggacttcaa 600
 ttcacagct tctcctgct actaacagac ttgctactca ctgggaaccc 650
 tgctgtggg ctcaaaactga gcgcctttgc tgctgtttcc tctgtcctgt 700
 caggtctcct ggggatgggtg gccacatga tgtattcaca agtcttcaa 750
 gcgactgtca acttgggtcc agaagactgg agaccacatg tttggaatta 800
 tggtgtggcc ttctacatgg cctggtcttc cttcacctgc tgcattggct 850
 cggctgtcac caccttcaac acgtacacca ggatgggtgct ggagttcaag 900
 tgcaagcata gtaagagctt caaggaaaac ccgaactgcc taccacatca 950
 ccatcagtgt ttccctcggc ggctgtcaag tgcagcccc accgtgggtc 1000
 ctttgaccag ctaccaccag tatcataatc agcccatcca ctctgtctct 1050
 gagggagtcg acttctactc cgagctgcgg aacaaggat ttcaaagagg 1100
 ggccagccag gagctgaaag aagcagttag gtcattctgta gaggaagagc 1150
 agtgtttaga gttaagcggg tttggggagt aggcttgagc cctaccttac 1200
 acgtctgctg attatcaaca tgtgtttaag ccaacatccg tctcttgagc 1250
 atggttttta gaggtacga ataaggctat gaataagggt tatctttaag 1300
 tctaaggga ttctgggtg ccaactgctc ttttctctc acagctccat 1350
 cttgtttcac ccaccacaca tctcacacat ccagaattcc cttctttact 1400
 gatagtttct gtgccaggtt ctgggctaaa ccatggagat aaaaagaaga 1450
 gtaaaatata cttcccgacc ttaaggatct gaaa 1484

<210> 272

<211> 285

<212> PRT

<213> Homo sapiens

<400> 272

Met	Ala	Lys	Met	Glu	Leu	Ser	Lys	Ala	Phe	Ser	Gly	Gln	Arg	Thr
1				5					10					15

Leu	Leu	Ser	Ala	Ile	Leu	Ser	Met	Leu	Ser	Leu	Ser	Phe	Ser	Thr
				20					25					30

Thr	Ser	Leu	Leu	Ser	Asn	Tyr	Trp	Phe	Val	Gly	Thr	Gln	Lys	Val
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

<210> 275
 <211> 2694
 <212> DNA
 <213> Homo sapiens

<400> 275
 gtagcgcgtc ttgggtctcc cggctgccgc tgctgcgcgc gccgcctcgg 50
 gtcgtggagc caggagcgac gtcaccgcca tggcaggcat caaagctttg 100
 attagtttgt ctttggagg agcaatcgga ctgatgtttt tgatgcttgg 150
 atgtgccctt ccaatataca acaaatactg gcccctcttt gttctatttt 200
 ttacatcct ttcacctatt ccatactgca tagcaagaag attagtggat 250
 gatacagatg ctatgagtaa cgcttgtaag gaacttgcca tctttcttac 300
 aacgggcatt gtcgtgtcag ctttggact ccctattgta ttgcccagag 350
 cacatctgat tgagtgggga gcttgtgcac ttgttctcac aggaaacaca 400
 gtcactcttg caactatact aggctttttc ttggtctttg gaagcaatga 450
 cgacttcagc tggcagcagt ggtgaaaaga aattactgaa ctattgtcaa 500
 atggacttcc tgtcatttgt tggccattca cgcacacagg agatggggca 550
 gttaatgctg aatggatatag caagcctctt gggggtatth taggtgctcc 600
 cttctcactt ttattgtaag catactattt tcacagagac ttgctgaagg 650
 attaaaagga ttttctcttt tggaaaagct tgactgattt cacacttatt 700
 tatagtatgc ttttgtggt gtctgtgta atttaaatat ttatgtgttt 750
 ttctgttag gttgattttt tttggaatca atatgcaatg ttaaactt 800
 ttttaagtga atcatttgca ttggttagga attcagaatt ccgccggctc 850
 tattactggt caagtacatc ttttctctta aaattattta gctccatta 900
 ttacaaaaaa ttataaaaat aagttttcag tcagtcagga tgacatcact 950
 cccaatgtta tgcagacata cagacggttg gcatacgtta tagactgtat 1000
 actcagtgca aatatagctg cttttatacc tcagaggggc caagtgttaa 1050
 tgcccatgcc ctccgttaag ggttgttggg tttactggtg gacagatgtt 1100
 ttgtggattg aaaattattt tatggaattg ctacagagga gtgcttttct 1150
 totcaattgt tagaagaatt tatgttaaac ttttaaggtaa ggggtgtaaa 1200
 acatttttga gataagggtt ttatttatgt ttattattgt tagagtgagt 1250
 tgcaatgtgg gaagaaatga cattgaaatt ccagtttttg aatcctgttt 1300
 ctattttataa gtgaaatttg tgatctccta tcaacctttc atgtttttacc 1350
 ctgttaaaat ggacatacat ggaaccacta ctgatgaggg acagttgtat 1400
 gtttgcata tatatgccag aaaaccttcc tctgcttcct ccttttgact 1450

tatttggatat gttgtatata ttacataaaa taacttttca aatatagttt 1500
aataacactt agaagtgttt acttacctgg aaaataattg ctatgccgta 1550
cattcagagt gccccctccc ctgcaaggcc ttgccatgat taacaagtaa 1600
cttgtagtc ttacagataa ttcattgcatt aacagtttaa gatttagacc 1650
atggtaatag tagttcttat tctctaaggt tatatcatat gtaatttaaa 1700
agtattttta agacaagttt cctgtatacc tctgaactgt tttgattttg 1750
agttcatcat gatagatctg ctgtttcctt ataaaaggca tttgttgtgt 1800
gagttaatgc aaagtagcca agtccagcta tatagcagct tcagaaacat 1850
acctgaccaa aaaattccca gtaaccaggc atgatcaatt tatagtggtc 1900
gtttacatct aataattatc aggacttttt tcaggagtgg gttataaaaa 1950
cattcaagtt ggtctgacag tatttttgta aggatatttg tttgtatgtt 2000
tattcagtat acttacataa aaattatttc gccatcagcc aaaactcagt 2050
aatcatgaca gctgtctgtt gttttatgaa gtttatttct caagaaaatg 2100
ggaataaatt tgggatttgt tcagcttttt tactaaagat gcctaaagcc 2150
acaggtttta ttgcctaact taagccatga ctttttagata tgagatgacg 2200
ggaagcagga cgaaatatcg gcgtgtggct ggagccttcc cactggaggc 2250
tgaaagtggc ttgtggtatt ataatgttca gatttcaaga ggaaggtgca 2300
ggtacacatg agttagagag ctggtagagc agttgggaac tctttgtgct 2350
tgtgatctac tggacttttt ttttgcagga agtgcattct ctggtccttc 2400
cctattttct gttctggatg tcagtgcagt gcactgctac tgttttatcc 2450
acttggccac agactttttc taacagctgc gtattatttc tatatactaa 2500
ttgcattggc agcattgtgt ctttgacctt gtatactagc ttgacatagt 2550
gctgtctctg atttctaggc tagttacttg agatatgaat tttccataga 2600
atatgcactg atacaacatt accattcttc tatggaaaga aaacttttga 2650
tgatgaaaca ataaagattt taaatatcta ttttaaaaaa aaaa 2694

<210> 276

<211> 131

<212> PRT

<213> Homo sapiens

<400> 276

Met Ala Gly Ile Lys Ala Leu Ile Ser Leu Ser Phe Gly Gly Ala
1 5 10 15

Ile Gly Leu Met Phe Leu Met Leu Gly Cys Ala Leu Pro Ile Tyr
20 25 30

Asn Lys Tyr Trp Pro Leu Phe Val Leu Phe Phe Tyr Ile Leu Ser

	35		40		45
Pro Ile Pro Tyr Cys Ile Ala Arg Arg Leu Val Asp Asp Thr Asp					
	50		55		60
Ala Met Ser Asn Ala Cys Lys Glu Leu Ala Ile Phe Leu Thr Thr					
	65		70		75
Gly Ile Val Val Ser Ala Phe Gly Leu Pro Ile Val Phe Ala Arg					
	80		85		90
Ala His Leu Ile Glu Trp Gly Ala Cys Ala Leu Val Leu Thr Gly					
	95		100		105
Asn Thr Val Ile Phe Ala Thr Ile Leu Gly Phe Phe Leu Val Phe					
	110		115		120
Gly Ser Asn Asp Asp Phe Ser Trp Gln Gln Trp					
	125		130		

<210> 277
 <211> 4104
 <212> DNA
 <213> Homo sapiens

<400> 277
 cccacgcgtc cgccacgcg tccgcccacg cgtccgccc cgcgtccgcc 50
 cacgcgtccg cccacgcgtc cgccacgcg tccggtgcaa gctcgcgccg 100
 cacactgcct ggtggagga aggagcccgg gcgcctctcg ccgctccccg 150
 cgccgccgtc cgcacctccc caccgcccgc cgcccgccgc ccgcccggcg 200
 caaagcatga gtgagcccgc tctctgcagc tgcccggggc gcgaatggca 250
 ggctgtttcc gcggagtaaa aggtggcgcc ggtcagtggg cgtttccaat 300
 gacggacatt aaccagactg tcagatcctg gggagtcgcg agccccgagt 350
 ttggagtttt ttccccccac aacgtcacag tccgaactgc agagggaaag 400
 gaaggcggca ggaaggcgaa gtcggggctc cggcacgtag ttgggaaact 450
 tgcgggtcct agaagtgcg tccccgcctt gccggccgccc cttgcagccc 500
 cgagccgagc agcaaagtga gacattgtgc gcctgccaga tccgccggcc 550
 gcggaccggg gctgcctcgg aaacacagag gggctcttctc tcgccctgca 600
 tataattagc ctgcacacaa agggagcagc tgaatggagg ttgtcactct 650
 ctggaaaagg atttctgacc gagcgcttcc aatggacatt ctccagtctc 700
 tctggaaaga ttctcgctaa tggatttcct gctgctcggt ctctgtctat 750
 actggctgct gaggaggccc tcgggggtgg tcttgtgtct gctggggggc 800
 tgctttcaga tgctgccgc cgccccagc gggtgccgc agctgtgccg 850
 gtgcgagggg cggctgctgt actgcgaggc gctcaacctc accgaggcgc 900
 cccacaacct gtccggcctg ctgggcttgt ccctgcgcta caacagcctc 950

tcggagctgc ggcgggcca gttcacggg ttaatgcagc tcacgtggct 1000
ctatctggat cacaatcaca tctgctccgt gcagggggac gcctttcaga 1050
aactgcgccc agttaaggaa ctcacgctga gttccaacca gatcacccaa 1100
ctgcccaca ccaccttccg gcccatgccc aacctgcgca gcgtggacct 1150
ctcgtacaac aagctgcagg cgctcgcgcc cgacctcttc cacgggctgc 1200
ggaagctcac cacgctgcat atgcgggcca acgccatcca gtttgtgccc 1250
gtgcgcatct tccaggactg ccgcagcctc aagtttctcg acatcggata 1300
caatcagctc aagagtctgg cgcgcaactc tttcgccggc ttgtttaagc 1350
tcaccgagct gcacctcgag cacaacgact tggtaagggt gaacttcgcc 1400
cacttcccgc gcctcatctc cctgcactcg ctctgcctgc ggaggaacaa 1450
ggtggccatt gtggtcagct cgctggactg ggtttggaac ctggagaaaa 1500
tggacttgtc gggcaacgag atcgagtaca tggagcccca tgtgttcgag 1550
accgtgccgc acctgcagtc cctgcagctg gactccaacc gcctcaccta 1600
catcgagccc cggatcctca actcttgga gtccttgaca agcatcacc 1650
tggccgggaa cctgtgggat tgcgggcgca acgtgtgtgc cctagcctcg 1700
tggctcagca acttccaggg gcgctacgat ggcaacttgc agtgcgccag 1750
cccggagtac gcacaggcg aggacgtcct ggacgccgtg tacgccttcc 1800
acctgtgcga ggatggggcc gagcccacca ggggccacct gctctcggcc 1850
gtcaccaacc gcagtgatct ggggccccct gccagctcgg ccaccacgct 1900
cgcggacggc ggggaggggc agcacgacgg cacattcgag cctgccaccg 1950
tggctcttcc aggcggcgag cacgcgaga acgccgtgca gatccacaag 2000
gtggtcacgg gcacatggc cctcatcttc tccttctca tcgtggctct 2050
ggtgctctac gtgtcctgga agtggttccc agccagcctc aggcagctca 2100
gacagtgtct tgctacgcag cgcaggaagc aaaagcagaa acagaccatg 2150
catcagatgg ctgccatgtc tgcccaggaa tactacgttg attacaaacc 2200
gaaccacatt gagggagccc tggatgatcat caacgagtat ggctcgtgta 2250
cctgccacca gcagcccgcg agggaatgcg aggtgtgatt gtcccagtgg 2300
ctctcaacct atgcgtacc aaatacgctt gggcagccgg gacgggccc 2350
cgggcaccag gctggggtct ccttgtctgt gctctgatat gctccttgac 2400
tgaaacttta aggggatctc tcccagagac ttgacatttt agctttattg 2450
tgtcttaaaa acaaaagcga attaaaacac acaaaaaaac cccacccac 2500
aaccttcagg acagtctatc ttaaatttca tatgagaact ccttcctccc 2550

tttgaagatc tgtccatatt caggaatctg agagtgtaaa aaaggtggcc 2600
 ataagacaga gagagaataa tcgtgctttg ttttatgcta ctccctccac 2650
 cctgcccattg attaaacatc atgtatgtag aagatcttaa gtccatacgc 2700
 atttcatgaa gaaccattgg aaagaggaat ctgcaatctg ggagcttaag 2750
 agcaaattgat gaccatagaa agctatgttc ttactttgtg tgtgtgtctg 2800
 tatgtttctg cgttgtgtgt ctttgtaggc aagcaaacgt tgtctacaca 2850
 aacgggaatt tagctcacat catttcatgc ccctgtgcct ctagctctgg 2900
 agattgggtg ggggaggtgg ggggaaacgg caggaataag ggaaagtgg 2950
 agttttaact aaggttttgt aacacttgaa atcttttctt tctcaaatta 3000
 attatcttta agcttcaaga aacttgcctt gaccctcta agcaaactac 3050
 taagcattta aaagagaatc taatttttaa aggtgtagca cttttttttt 3100
 tattcttccc acagaggtg ctaatctcat tatgtgtgc tatctgaaaa 3150
 gaacttaagg ccacaattca cgtctcgtcc tgggcattgt gatggattga 3200
 ccctccattt gcagtacctt ccagctgat taaagttcag cagtggattt 3250
 gaggtttttc gaatatattat atagaaaaaa agtcttttca catgacaaat 3300
 gacactctca caccagtctt agccctagta gttttttagg ttggaccaga 3350
 ggaagcaggt taaatgagac ctgtcctctg ctgcactcag aaaaaatagg 3400
 cagtccctga tgctcagatc tttagcctga tattaatagt tgagaccacc 3450
 taccacaat gcagcctata ctccaagac tacaaagtta ccatcgcaaa 3500
 ggaaaggta ttccagtaaa aggaaatagt tttctcaacc atttaaaaat 3550
 attcttctga actcatcaaa gtagaagagc cccaacctt ttctctctgc 3600
 cttcaagaag gcagacattt ggtatgattt agcatcaaca acacatttat 3650
 gagtatatgt aagtaatcag aggggcaaatt gccacttggt attcctccca 3700
 agttttccaa gcaagtacac acagatctct ggtaggatta ggggccactt 3750
 gtgtttccgg cttatttttag tcgacttgtc agcaagtttg atgcctagtc 3800
 tatctgacat ggcccagtag aacagggcat tgatggatca catgagatgg 3850
 tagaaggaac atcatcacat acccctctca cagagaaaat tatcaaagaa 3900
 ccagaaatta tatctgtttt ggagcaagag tgcataatg tttcagggtta 3950
 gtcaaaaata acataaatta tctcctctag atgagtggcg atgttggctg 4000
 atttgggtct gccattgaca gaatgtcaaa taaaaggaa ttagctagaa 4050
 tatgaccatt aaatgtgctt ctgaaatata ttttgagata ggtttagaat 4100
 gtca 4104

[illegible]

Met	Asp	Phe	Leu	Leu	Leu	Gly	Leu	Cys	Leu	Tyr	Trp	Leu	Leu	Arg
1				5					10					15
Arg	Pro	Ser	Gly	Val	Val	Leu	Cys	Leu	Leu	Gly	Ala	Cys	Phe	Gln
				20					25					30
Met	Leu	Pro	Ala	Ala	Pro	Ser	Gly	Cys	Pro	Gln	Leu	Cys	Arg	Cys
				35					40					45
Glu	Gly	Arg	Leu	Leu	Tyr	Cys	Glu	Ala	Leu	Asn	Leu	Thr	Glu	Ala
				50					55					60
Pro	His	Asn	Leu	Ser	Gly	Leu	Leu	Gly	Leu	Ser	Leu	Arg	Tyr	Asn
				65					70					75
Ser	Leu	Ser	Glu	Leu	Arg	Ala	Gly	Gln	Phe	Thr	Gly	Leu	Met	Gln
				80					85					90
Leu	Thr	Trp	Leu	Tyr	Leu	Asp	His	Asn	His	Ile	Cys	Ser	Val	Gln
				95					100					105
Gly	Asp	Ala	Phe	Gln	Lys	Leu	Arg	Arg	Val	Lys	Glu	Leu	Thr	Leu
				110					115					120
Ser	Ser	Asn	Gln	Ile	Thr	Gln	Leu	Pro	Asn	Thr	Thr	Phe	Arg	Pro
				125					130					135
Met	Pro	Asn	Leu	Arg	Ser	Val	Asp	Leu	Ser	Tyr	Asn	Lys	Leu	Gln
				140					145					150
Ala	Leu	Ala	Pro	Asp	Leu	Phe	His	Gly	Leu	Arg	Lys	Leu	Thr	Thr
				155					160					165
Leu	His	Met	Arg	Ala	Asn	Ala	Ile	Gln	Phe	Val	Pro	Val	Arg	Ile
				170					175					180
Phe	Gln	Asp	Cys	Arg	Ser	Leu	Lys	Phe	Leu	Asp	Ile	Gly	Tyr	Asn
				185					190					195
Gln	Leu	Lys	Ser	Leu	Ala	Arg	Asn	Ser	Phe	Ala	Gly	Leu	Phe	Lys
				200					205					210
Leu	Thr	Glu	Leu	His	Leu	Glu	His	Asn	Asp	Leu	Val	Lys	Val	Asn
				215					220					225
Phe	Ala	His	Phe	Pro	Arg	Leu	Ile	Ser	Leu	His	Ser	Leu	Cys	Leu
				230					235					240
Arg	Arg	Asn	Lys	Val	Ala	Ile	Val	Val	Ser	Ser	Leu	Asp	Trp	Val
				245					250					255
Trp	Asn	Leu	Glu	Lys	Met	Asp	Leu	Ser	Gly	Asn	Glu	Ile	Glu	Tyr
				260					265					270
Met	Glu	Pro	His	Val	Phe	Glu	Thr	Val	Pro	His	Leu	Gln	Ser	Leu
				275					280					285

Gln	Leu	Asp	Ser	Asn	Arg	Leu	Thr	Tyr	Ile	Glu	Pro	Arg	Ile	Leu
				290					295					300
Asn	Ser	Trp	Lys	Ser	Leu	Thr	Ser	Ile	Thr	Leu	Ala	Gly	Asn	Leu
				305					310					315
Trp	Asp	Cys	Gly	Arg	Asn	Val	Cys	Ala	Leu	Ala	Ser	Trp	Leu	Ser
				320					325					330
Asn	Phe	Gln	Gly	Arg	Tyr	Asp	Gly	Asn	Leu	Gln	Cys	Ala	Ser	Pro
				335					340					345
Glu	Tyr	Ala	Gln	Gly	Glu	Asp	Val	Leu	Asp	Ala	Val	Tyr	Ala	Phe
				350					355					360
His	Leu	Cys	Glu	Asp	Gly	Ala	Glu	Pro	Thr	Ser	Gly	His	Leu	Leu
				365					370					375
Ser	Ala	Val	Thr	Asn	Arg	Ser	Asp	Leu	Gly	Pro	Pro	Ala	Ser	Ser
				380					385					390
Ala	Thr	Thr	Leu	Ala	Asp	Gly	Gly	Glu	Gly	Gln	His	Asp	Gly	Thr
				395					400					405
Phe	Glu	Pro	Ala	Thr	Val	Ala	Leu	Pro	Gly	Gly	Glu	His	Ala	Glu
				410					415					420
Asn	Ala	Val	Gln	Ile	His	Lys	Val	Val	Thr	Gly	Thr	Met	Ala	Leu
				425					430					435
Ile	Phe	Ser	Phe	Leu	Ile	Val	Val	Leu	Val	Leu	Tyr	Val	Ser	Trp
				440					445					450
Lys	Cys	Phe	Pro	Ala	Ser	Leu	Arg	Gln	Leu	Arg	Gln	Cys	Phe	Val
				455					460					465
Thr	Gln	Arg	Arg	Lys	Gln	Lys	Gln	Lys	Gln	Thr	Met	His	Gln	Met
				470					475					480
Ala	Ala	Met	Ser	Ala	Gln	Glu	Tyr	Tyr	Val	Asp	Tyr	Lys	Pro	Asn
				485					490					495
His	Ile	Glu	Gly	Ala	Leu	Val	Ile	Ile	Asn	Glu	Tyr	Gly	Ser	Cys
				500					505					510
Thr	Cys	His	Gln	Gln	Pro	Ala	Arg	Glu	Cys	Glu	Val			
				515					520					

<210> 279

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 279

tccgtgcagg gggacgcctt tcagaaactg cgccgagtta aggaac 46

<210> 280

<211> 709

<212> DNA

<213> Homo sapiens

<400> 280
 gtgcaaggag ccgaggcgag atgggcgtcc tgggccgggt cctgctgtgg 50
 ctgcagctct gcgcactgac ccaggcggtc tccaaactct gggccccaa 100
 cacggacttc gacgtcgag ccaactggag ccagaaccgg acccgtgcg 150
 ccggcggcgc cgttgagttc ccggcggaca agatggtgtc agtcctggtg 200
 caagaaggtc acgccgtctc agacatgctc ctgccgctgg atggggaact 250
 cgtcctggct tcaggagccg gattcggcgt ctcagacgtg ggctcgcacc 300
 tggactgtgg cgcgggcgaa cctgccgtct tccgcgactc tgaccgcttc 350
 tcctggcatg acccgcacct gtggcgtctc ggggacgagg cacctggcct 400
 cttcttcgtg gacgccgagc gcgtgccctg ccgccacgac gacgtcttct 450
 ttccgcctag tgctctcttc cgcgtggggc tcggccctgg cgctagcccc 500
 gtgctgttcc gcagcatctc ggctctgggc cggacgttca cgcgcgacga 550
 ggacctggct gttttcctgg cgtcccgcgc gggccgccta cgcttccacg 600
 ggccgggcgc gctgagcgtg ggccccgagg actgcgcgga cccgtcgggc 650
 tgcgtctgcg gcaacgcgga ggcgagccg tggatctgcg cggccctgct 700
 ccagcccct 709

<210> 281
 <211> 229
 <212> PRT
 <213> Homo sapiens

<400> 281
 Met Gly Val Leu Gly Arg Val Leu Leu Trp Leu Gln Leu Cys Ala
 1 5 10 15
 Leu Thr Gln Ala Val Ser Lys Leu Trp Val Pro Asn Thr Asp Phe
 20 25 30
 Asp Val Ala Ala Asn Trp Ser Gln Asn Arg Thr Pro Cys Ala Gly
 35 40 45
 Gly Ala Val Glu Phe Pro Ala Asp Lys Met Val Ser Val Leu Val
 50 55 60
 Gln Glu Gly His Ala Val Ser Asp Met Leu Leu Pro Leu Asp Gly
 65 70 75
 Glu Leu Val Leu Ala Ser Gly Ala Gly Phe Gly Val Ser Asp Val
 80 85 90
 Gly Ser His Leu Asp Cys Gly Ala Gly Glu Pro Ala Val Phe Arg
 95 100 105
 Asp Ser Asp Arg Phe Ser Trp His Asp Pro His Leu Trp Arg Ser
 110 115 120
 Gly Asp Glu Ala Pro Gly Leu Phe Phe Val Asp Ala Glu Arg Val
 125 130 135

Pro	Cys	Arg	His	Asp	Asp	Val	Phe	Phe	Pro	Pro	Ser	Ala	Ser	Phe
				140					145					150
Arg	Val	Gly	Leu	Gly	Pro	Gly	Ala	Ser	Pro	Val	Arg	Val	Arg	Ser
				155					160					165
Ile	Ser	Ala	Leu	Gly	Arg	Thr	Phe	Thr	Arg	Asp	Glu	Asp	Leu	Ala
				170					175					180
Val	Phe	Leu	Ala	Ser	Arg	Ala	Gly	Arg	Leu	Arg	Phe	His	Gly	Pro
				185					190					195
Gly	Ala	Leu	Ser	Val	Gly	Pro	Glu	Asp	Cys	Ala	Asp	Pro	Ser	Gly
				200					205					210
Cys	Val	Cys	Gly	Asn	Ala	Glu	Ala	Gln	Pro	Trp	Ile	Cys	Ala	Ala
				215					220					225
Leu	Leu	Gln	Pro											

<210> 282
 <211> 644
 <212> DNA
 <213> Homo sapiens

<400> 282
 atcgcatcaa ttgggagtag catcttcctc atgggaccag tgaaacagct 50
 gaagcgaatg tttgagccta ctggtttgat tgcaactatc atggtgctgt 100
 tgtgttttgc acttaccctg tgtttctgct tttggtggca taacaaggga 150
 cttgcactta tcttctgcat tttgcagtct ttggcattga cgtggtacag 200
 cctttccttc ataccatttg caagggatgc tgtgaagaag tgttttgccg 250
 tgtgtcttgc ataattcatg gccagtttta tgaagctttg gaaggcacta 300
 tggacagaag ctggtggaca gttttgtaac tatcttcgaa acctctgtct 350
 tacagacatg tgccttttat cttgcagcaa tgtgttgctt gtgattcgaa 400
 catttgaggg ttacttttgg aagcaacaat acattctcga acctgaatgt 450
 cagtagcaca ggatgagaag tgggttctgt atcttgtgga gtggaatctt 500
 cctcatgtac ctgtttcctc tctggatggt gtccactga attcccatga 550
 atacaaacct attcagcaac agcaaaaaaa aaaaaaaaaa aaaaaaaaaa 600
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 644

<210> 283
 <211> 77
 <212> PRT
 <213> Homo sapiens

<400> 283
 Met Gly Pro Val Lys Gln Leu Lys Arg Met Phe Glu Pro Thr Arg
 1 5 10 15
 Leu Ile Ala Thr Ile Met Val Leu Leu Cys Phe Ala Leu Thr Leu

	20		25		30
Cys Ser Ala Phe Trp Trp His Asn Lys Gly Leu Ala Leu Ile Phe					
	35		40		45
Cys Ile Leu Gln Ser Leu Ala Leu Thr Trp Tyr Ser Leu Ser Phe					
	50		55		60
Ile Pro Phe Ala Arg Asp Ala Val Lys Lys Cys Phe Ala Val Cys					
	65		70		75
Leu Ala					

<210> 284
 <211> 2623
 <212> DNA
 <213> Homo sapiens

<400> 284
 ttgagcgcag gtgagctcct gcgcgttccg ggggcgttcc tccagtcacc 50
 ctcccgccgt taccgcgggc gcgcccgcagg gagtctcctc cagaccctcc 100
 ctcccggttg tccaaactaa tacggactga acggatcgct gcgagggtgg 150
 gagagaaaat tagggggaga aaggacagag agagcaacta ccatccatag 200
 ccagatagat tatcttacac tgaactgac aagtactttg aaaatgactt 250
 cgaaatttat cttggtgtcc ttcatacttg ctgcactgag tctttcaacc 300
 accttttctc tccaactaga ccagcaaaag gttctactag tttcttttga 350
 tggattccgt tgggattact tatataaagt tccaacgccc cattttcatt 400
 atattatgaa atatggtggt cacgtgaagc aagttactaa tgtttttatt 450
 acaaaaacct accctaacca ttatactttg gtaactggcc tctttgcaga 500
 gaatcatggg attgttgcaa atgatatggt tgatcctatt cggaacaaat 550
 ctttctcctt ggatcacatg aatatttatg attccaagtt ttgggaagaa 600
 gcgacaccaa tatggatcac aaaccagagg gcaggacata ctagtgggtgc 650
 agccatgttg cccggaacag atgtaaaaat acataagcgc tttcctactc 700
 attacatgcc ttacaatgag tcagtttcat ttgaagatag agttgccaaa 750
 attgttgaat ggtttacgtc aaaagagccc ataaatcttg gtcttctcta 800
 ttgggaagac cctgatgaca tgggccacca tttgggacct gacagtccgc 850
 tcatggggcc tgtcatttca gatattgaca agaagttagg atatctcata 900
 caaatgctga aaaaggcaaa gttgtggaac actctgaacc taatcatcac 950
 aagtgatcat ggaatgacgc agtgctctga ggaaagggtta atagaacttg 1000
 accagtacct ggataaagac cactataccc tgattgatca atctccagta 1050
 gcagccatct tgccaaaaga aggtaaattt gatgaagtct atgaagcact 1100

aactcacgct	catcctaatac	ttactgttta	caaaaaagaa	gacgtttccag	1150
aaaggtggca	ttacaaatac	aacagtcgaa	ttcaaccaat	catagcagtg	1200
gctgatgaag	ggtggcacat	tttacagaat	aagtcagatg	acttttctgtt	1250
aggcaaccac	ggttacgata	atgcgttagc	agatatgcat	ccaatatttt	1300
tagcccatgg	tctctgccttc	agaaagaatt	tctcaaaaga	agccatgaac	1350
tccacagatt	tgtaccctact	actatgccac	ctcctcaata	tctactgccat	1400
gccacacaat	ggatcattct	ggaatgtcca	ggatctgctc	aattcagcaa	1450
tgccaagggg	ggtcccttat	acacagagta	ctatactcct	ccctggtagt	1500
gttaaaccag	cagaatatga	ccaagagggg	tcataccctt	atttcatagg	1550
ggtctctctt	ggcagcatta	tagtgattgt	atTTTTtGta	attttcatta	1600
agcattttaat	tcacagtcaa	atacctgcct	tacaagatat	gcatgctgaa	1650
atagctcaac	cattattaca	agcctaattg	tactttgaag	tggatttgca	1700
tattgaagtg	gagattccat	aattatgtca	gtgtttaaag	gtttcaaatt	1750
ctgggaaacc	agttccaaac	atctgcagaa	accattaagc	agttacatat	1800
ttaggtatac	acacacacac	acacacacac	atacacacac	acggacccaa	1850
atacttacac	ctgcaaagga	ataaagatgt	gagagtatgt	ctccattggt	1900
cactgtagca	tagggataga	taagatcctg	ctttatttg	acttggcgca	1950
gataatgtat	atatttagca	actttgcact	atgtaaagta	ccttatatat	2000
tgcactttaa	atttctctcc	tgatgggtac	tttaatttga	aatgcacttt	2050
atggacagtt	atgtcttata	acttgattga	aaatgacaac	tttttgcacc	2100
catgtcacag	aatacttggt	acgcattggt	caaactgaag	gaaatttcta	2150
ataatcccga	ataatgaaca	tagaaatcta	tctccataaa	ttgagagaag	2200
aagaaggtga	taagtgttga	aaattaaatg	tgataacctt	tgaaccttga	2250
attttggaga	tgtattccca	acagcagaat	gcaactgtgg	gcatttcttg	2300
tcttatttct	ttocagagaa	cgtgggtttc	atttattttt	ccctcaaaag	2350
agagtcaaat	actgacagat	tcgttctaaa	tatatgtgtt	ctgtcataaa	2400
attattgtga	tttctgatg	agtcatatata	ctgtgatttt	cataataatg	2450
aagacaccat	gaatatactt	ttcttctata	tagttcagca	atggcctgaa	2500
tagaagcaac	caggcaccat	ctcagcaatg	ttttctcttg	tttgtaatta	2550
tttgctcctt	tgaaaattaa	atcactatta	attacattaa	aaatcaaatt	2600
ggataaaaaa	aaaaaaaaaa	aaa	2623		

<210> 285

[illegible]

252

290	295	300
Val Pro Glu Arg Trp His Tyr Lys Tyr	Asn Ser Arg Ile Gln Pro	
305	310	315
Ile Ile Ala Val Ala Asp Glu Gly Trp	His Ile Leu Gln Asn Lys	
320	325	330
Ser Asp Asp Phe Leu Leu Gly Asn His	Gly Tyr Asp Asn Ala Leu	
335	340	345
Ala Asp Met His Pro Ile Phe Leu Ala	His Gly Pro Ala Phe Arg	
350	355	360
Lys Asn Phe Ser Lys Glu Ala Met Asn	Ser Thr Asp Leu Tyr Pro	
365	370	375
Leu Leu Cys His Leu Leu Asn Ile Thr	Ala Met Pro His Asn Gly	
380	385	390
Ser Phe Trp Asn Val Gln Asp Leu Leu	Asn Ser Ala Met Pro Arg	
395	400	405
Val Val Pro Tyr Thr Gln Ser Thr Ile	Leu Leu Pro Gly Ser Val	
410	415	420
Lys Pro Ala Glu Tyr Asp Gln Glu Gly	Ser Tyr Pro Tyr Phe Ile	
425	430	435
Gly Val Ser Leu Gly Ser Ile Ile Val	Ile Val Phe Phe Val Ile	
440	445	450
Phe Ile Lys His Leu Ile His Ser Gln	Ile Pro Ala Leu Gln Asp	
455	460	465
Met His Ala Glu Ile Ala Gln Pro Leu	Leu Gln Ala	
470	475	

<210> 286
 <211> 1337
 <212> DNA
 <213> Homo sapiens

<400> 286
 ggatttttgt gatccgcgat tcgctccac gggcgggacc ttgtgtaactg 50
 cgggaggccc aggacaggcc caccctgcg ggcgggaggc agccggggtg 100
 agggaggtga agaaaccaag acgcagagag gccaagcccc ttgccttggg 150
 tcacacagcc aaaggaggca gagccagaac tcacaaccag atccagaggc 200
 aacagggaca tggccacctg ggacgaaaag gcagtcaccc gcagggccaa 250
 ggtggctccc gctgagagga tgagcaagtt cttaaggcac ttcacggtcg 300
 tgggagacga ctaccatgcc tggaacatca actacaagaa atggggagaat 350
 gaagaggagg aggaggagga ggagcagcca ccaccacac cagtctcagg 400
 cgaggaaggc agagctgcag cccctgacgt tgcccctgcc cctggccccg 450
 caccagggc ccccttgac ttcaggggca tgttgaggaa actgttcagc 500

tcccacaggt ttcaggtcat catcatctgc ttggtggttc tggatgccct 550
 cctggtgctt gctgagctca tcctggacct gaagatcatc cagcccgaca 600
 agaataacta tgctgccatg gtattccact acatgagcat caccatcttg 650
 gtctttttta tgatggagat catctttaaa ttatttgtct tccgcctgag 700
 ttctttcacc acaagtttga gatcctggat gcccgtcgtg gtggtggtct 750
 cattcatcct ggacattgtc ctctgttcc aggagcacca gtttgaggct 800
 ctgggcctgc tgattctgct ccggtgtggt cgggtggccc ggatcatcaa 850
 tgggattatc atctcagtta agacacgttc agaacggcaa ctcttaaggt 900
 taaaacagat gaatgtacaa ttggccgcca agattcaaca ccttgagttc 950
 agctgctctg agaagccctt ggactgatga gtttgctgta tcaacctgta 1000
 aggagaagct ctctccggat ggctatggga atgaaagaat ccgacttcta 1050
 ctctcacaca gccaccgtga aagtcctgga gtaaaatgtg ctgtgtacag 1100
 aagagagaga aggaagcagg ctggcatggt cactgggctg gtgttacgac 1150
 agagaacctg acagtcactg gccagttatc acttcagatt acaaatacaca 1200
 cagagcatct gcctgttttc aatcacaaaga gaacaaaacc aaaatctata 1250
 aagatattct gaaaatatga cagaatttga caaataaaaag cataaacgtg 1300
 taaaaaaaa aaaaaaaaa aaaaaaaaa aaaaaaa 1337

<210> 287
 <211> 255
 <212> PRT
 <213> Homo sapiens

<400> 287
 Met Ala Thr Trp Asp Glu Lys Ala Val Thr Arg Arg Ala Lys Val
 1 5 10 15
 Ala Pro Ala Glu Arg Met Ser Lys Phe Leu Arg His Phe Thr Val
 20 25 30
 Val Gly Asp Asp Tyr His Ala Trp Asn Ile Asn Tyr Lys Lys Trp
 35 40 45
 Glu Asn Glu Glu Glu Glu Glu Glu Glu Glu Gln Pro Pro Pro Thr
 50 55 60
 Pro Val Ser Gly Glu Glu Gly Arg Ala Ala Ala Pro Asp Val Ala
 65 70 75
 Pro Ala Pro Gly Pro Ala Pro Arg Ala Pro Leu Asp Phe Arg Gly
 80 85 90
 Met Leu Arg Lys Leu Phe Ser Ser His Arg Phe Gln Val Ile Ile
 95 100 105
 Ile Cys Leu Val Val Leu Asp Ala Leu Leu Val Leu Ala Glu Leu
 110 115 120

Ile	Leu	Asp	Leu	Lys	Ile	Ile	Gln	Pro	Asp	Lys	Asn	Asn	Tyr	Ala
				125					130					135
Ala	Met	Val	Phe	His	Tyr	Met	Ser	Ile	Thr	Ile	Leu	Val	Phe	Phe
				140					145					150
Met	Met	Glu	Ile	Ile	Phe	Lys	Leu	Phe	Val	Phe	Arg	Leu	Ser	Ser
				155					160					165
Phe	Thr	Thr	Ser	Leu	Arg	Ser	Trp	Met	Pro	Val	Val	Val	Val	Val
				170					175					180
Ser	Phe	Ile	Leu	Asp	Ile	Val	Leu	Leu	Phe	Gln	Glu	His	Gln	Phe
				185					190					195
Glu	Ala	Leu	Gly	Leu	Leu	Ile	Leu	Leu	Arg	Leu	Trp	Arg	Val	Ala
				200					205					210
Arg	Ile	Ile	Asn	Gly	Ile	Ile	Ile	Ser	Val	Lys	Thr	Arg	Ser	Glu
				215					220					225
Arg	Gln	Leu	Leu	Arg	Leu	Lys	Gln	Met	Asn	Val	Gln	Leu	Ala	Ala
				230					235					240
Lys	Ile	Gln	His	Leu	Glu	Phe	Ser	Cys	Ser	Glu	Lys	Pro	Leu	Asp
				245					250					255

<210> 288
 <211> 3334
 <212> DNA
 <213> Homo sapiens

<400> 288
 cggctcgagc tcgagccgaa tcggctcgag gggcagtgga gcacccagca 50
 ggccgccaac atgctctgtc tgtgcctgta cgtgccggtc atcggggaag 100
 cccagaccga gttccagtac tttgagtcga aggggctccc tgccgagctg 150
 aagtccattt tcaagctcag tgtcttcac cctcccagg aattctccac 200
 ctaccgccag tggaagcaga aaattgtaca agctggagat aaggaccttg 250
 atgggcagct agactttgaa gaatttgtcc attatctcca agatcatgag 300
 aagaagctga ggctggtgtt taagattttg gacaaaaaga atgatggacg 350
 cattgacgag caggagatca tgcagtccct gcgggacttg ggagtcaaga 400
 tatctgaaca gcaggcagaa aaaattctca agagcatgga taaaaacggc 450
 acgatgacca tcgactggaa cgagtggaga gactaccacc tctccaccc 500
 cgtggaaaac atccccgaga tcctcctcta ctggaagcat tccacgatct 550
 ttgatgtggg tgagaatcta acggtcccgg atgagttcac agtggaggag 600
 aggcagacgg ggatgtggtg gagacacctg gtggcaggag gtggggcagg 650
 ggccgtatcc agaacctgca cggccccctt ggacaggctc aaggtgctca 700
 tgcaggtcca tgcctcccg cagcaacaaca tgggcacgtg tgggtggcttc 750

actcagatga ttcgagaagg aggggccagg tcaactctggc ggggcaatgg 800
catcaacgtc ctcaaaattg cccccgaatc agccatcaaa ttcatggcct 850
atgagcagat caagcgctt gttggtagt accaggagac tctgaggatt 900
cacgagaggc ttgtggcagg gtccttggca ggggccatcg cccagagcag 950
catctacca atggaggtcc tgaagacccg gatggcgctg cggaagacag 1000
gccagtactc aggaatgctg gactgcgcca ggaggatcct ggccagagag 1050
ggggtggccg ccttctacaa aggctatgtc cccaacatgc tgggcatcat 1100
cccctatgcc ggcatcgacc ttgcagtcta cgagacgctc aagaatgcct 1150
ggctgcagca ctatgcagt aacagcgcg accccggcgt gtttgtgctc 1200
ctggcctgtg gcacatgtc cagtacctgt ggccagctgg ccagctaccc 1250
cctggcccta gtcaggacc ggatgcaggc gcaagcctct attgagggcg 1300
ctccggaggt gaccatgagc agcctcttca aacatatact gcggaccgag 1350
ggggccttcg ggctgtacag ggggctggcc cccaacttca tgaaggatcat 1400
cccagctgtg agcatcagct acgtggtcta cgagaacctg aagatcacc 1450
tgggcgtgca gtcgcggtga cggggggagg gccgcccggc agtggactcg 1500
ctgatcctgg gccgcagcct ggggtgtgca gccatctcat tctgtgaatg 1550
tgccaacact aagctgtctc gagccaagct gtgaaaacc tagacgcacc 1600
cgcagggagg gtggggagag ctggcaggcc cagggttgt cctgctgacc 1650
ccagcagacc ctctgttgg ttccagcgaa gaccacaggc attccttagg 1700
gtccagggtc agcaggctcc gggctcacat gtgtaaggac aggacatttt 1750
ctgcagtgcc tgccaatagt gagcttggag cctggaggcc ggcttagttc 1800
ttccatttca cccttgacg cagctgttgg ccacggcccc tgccctctgg 1850
tctgccgtgc atctccctgt gccctcttgc tgccctgctg tctgctgagg 1900
taaggtggga ggagggctac agccacatc ccacccctc gtccaatccc 1950
ataatccatg atgaaagggt aggtcacgtg gcctcccagg cctgacttcc 2000
caacctacag cattgacgcc aacttggtg tgaaggaaga ggaaaggatc 2050
tggccttgtg gtcactggca tctgagccct gctgatggct ggggctctcg 2100
ggcatgcttg ggagtgcagg gggctcgggc tgccctggcct ggctgcacag 2150
aaggcaagtg ctggggctca tgggtgctctg agctggcctg gaccctgtca 2200
ggatgggccc cacctcagaa ccaaactcac tgtccccact gtggcatgag 2250
ggcagtggag caccatgttt gagggcgaag ggagagcgt ttgtgtgttc 2300
tggggaggga aggaaaaggt gttggaggcc ttaattatgg actgttggga 2350

aaaggggtttt gtccagaagg acaagccgga caaatgagcg acttctgtgc 2400
 ttccagagga agacgagggg gcaggagctt ggctgactgc tcagagtctg 2450
 ttctgacgcc ctgggggttc ctgtccaacc ccagcagggg cgcagcggga 2500
 ccagccccac attccacttg tgtcactgct tggaacctat ttattttgta 2550
 tttatttgaa cagagttatg tcctaactat ttttatagat ttgtttaatt 2600
 aatagcttgt cattttcaag ttcatTTTTT attcatattt atgttcatgg 2650
 ttgattgtac cttcccaagc ccgcccagtg ggatgggagg aggaggagaa 2700
 ggggggcctt gggccgctgc agtcacatct gtccagagaa attccttttg 2750
 ggactggagg cagaaaagcg gccagaaggc agcagccctg gtccttttcc 2800
 tttggcaggt tggggaaggg cttgccccca gccttaggat ttcagggttt 2850
 gactgggggc gtggagagag agggaggaac ctcaataacc ttgaaggtgg 2900
 aatccagtta tttcctgcgc tgcgagggtt tctttatttc actcttttct 2950
 gaatgtcaag gcagtgaggt gcctctcact gtgaatttgt ggtgggcggg 3000
 ggctggagga gaggggtggg ggctggctcc gtccctccca gccttctgct 3050
 gcccttgctt aacaatgccg gccaaactggc gacctcacgg ttgcacttcc 3100
 attccaccag aatgacctga tgaggaaatc ttcaatagga tgcaaagatc 3150
 aatgcaaaaa ttgttatata tgaacatata actggagtcg tcaaaaagca 3200
 aattaagaaa gaattggacg ttagaagttg tcatttaaag cagccttcta 3250
 ataaagtgtt ttcaaagctg aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3300
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 3334

<210> 289
 <211> 469
 <212> PRT
 <213> Homo sapiens

<400> 289
 Met Leu Cys Leu Cys Leu Tyr Val Pro Val Ile Gly Glu Ala Gln
 1 5 10 15
 Thr Glu Phe Gln Tyr Phe Glu Ser Lys Gly Leu Pro Ala Glu Leu
 20 25 30
 Lys Ser Ile Phe Lys Leu Ser Val Phe Ile Pro Ser Gln Glu Phe
 35 40 45
 Ser Thr Tyr Arg Gln Trp Lys Gln Lys Ile Val Gln Ala Gly Asp
 50 55 60
 Lys Asp Leu Asp Gly Gln Leu Asp Phe Glu Glu Phe Val His Tyr
 65 70 75
 Leu Gln Asp His Glu Lys Lys Leu Arg Leu Val Phe Lys Ile Leu
 80 85 90

Gln	Ala	Gln	Ala	Ser	Ile	Glu	Gly	Ala	Pro	Glu	Val	Thr	Met	Ser	
				410					415					420	
Ser	Leu	Phe	Lys	His	Ile	Leu	Arg	Thr	Glu	Gly	Ala	Phe	Gly	Leu	
				425					430					435	
Tyr	Arg	Gly	Leu	Ala	Pro	Asn	Phe	Met	Lys	Val	Ile	Pro	Ala	Val	
				440					445					450	
Ser	Ile	Ser	Tyr	Val	Val	Tyr	Glu	Asn	Leu	Lys	Ile	Thr	Leu	Gly	
				455					460					465	
Val	Gln	Ser	Arg												

<210> 290
 <211> 1658
 <212> DNA
 <213> Homo sapiens

<400> 290
 ggaaggcagc ggcagctcca ctcagccagt acccagatac gctgggaacc 50
 ttccccagcc atggcttccc tggggcagat cctcttctgg agcataatta 100
 gcatcatcat tattctggct ggagcaattg cactcatcat tggctttggt 150
 atttcaggga gacactccat cacagtcact actgtgcct cagctgggaa 200
 cattggggag gatggaatcc tgagctgcac ttttgaacct gacatcaaac 250
 tttctgatat cgtgatacaa tggtgaagg aaggtgtttt aggcttggtc 300
 catgagttca aagaaggcaa agatgagctg tcggagcagg atgaaatgtt 350
 cagaggccgg acagcagtgt ttgctgatca agtgatagtt ggcaatgcct 400
 ctttgccggt gaaaaacgtg caactcacag atgctggcac ctacaaatgt 450
 tatatcatca cttctaaagg caaggggaat gctaaccttg agtataaaac 500
 tggagccttc agcatgccgg aagtgaatgt ggactataat gccagctcag 550
 agaccttgcg gtgtgaggct ccccgatggt tccccagcc cacagtgggtc 600
 tgggcatccc aagttgacca gggagccaac ttctcggaag tctccaatac 650
 cagctttgag ctgaactctg agaatgtgac catgaagggt gtgtctgtgc 700
 tctacaatgt tacgatcaac aacacatact cctgtatgat tgaaaatgac 750
 attgccaaag caacagggga tatcaaagtg acagaatogg agatcaaaag 800
 gcggagtcac ctacagctgc taaactcaaa ggcttctctg tgtgtctctt 850
 ctttctttgc catcagctgg gcacttctgc ctctcagccc ttacctgatg 900
 ctaaaataat gtgccttggc cacaaaaaag catgcaaagt cattgttaca 950
 acagggatct acagaactat ttcaccacca gatatgacct agttttatat 1000
 ttctgggagg aaatgaattc atatctagaa gtctggagtg agcaaacaag 1050

agcaagaaac aaaaagaagc caaaagcaga aggctccaat atgaacaaga 1100
 taaatctatc ttcaaagaca tattagaagt tgggaaaata attcatgtga 1150
 actagacaag tgtgttaaga gtgataagta aaatgcacgt ggagacaagt 1200
 gcatccccag atctcaggga cctccccctg cctgtcacct ggggagtgag 1250
 aggacaggat agtgcattgt ctttgtctct gaatttttag ttatatgtgc 1300
 tgtaatgttg ctctgaggaa gcccttgaa agtctatccc aacatatcca 1350
 catcttatat tccacaaatt aagctgtagt atgtacccta agacgctgct 1400
 aattgactgc cacttcgcaa ctcaggggcg gctgcatttt agtaatgggt 1450
 caaatgattc actttttatg atgcttccaa aggtgccttg gcttctcttc 1500
 ccaactgaca aatgccaaag ttgagaaaaa tgatcataat ttagcataa 1550
 acagagcagt cggggacacc gattttataa ataaactgag caccttcttt 1600
 ttaaacaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1650
 aaaaaaaaa 1658

<210> 291
 <211> 282
 <212> PRT
 <213> Homo sapiens

<400> 291
 Met Ala Ser Leu Gly Gln Ile Leu Phe Trp Ser Ile Ile Ser Ile
 1 5 10 15
 Ile Ile Ile Leu Ala Gly Ala Ile Ala Leu Ile Ile Gly Phe Gly
 20 25 30
 Ile Ser Gly Arg His Ser Ile Thr Val Thr Thr Val Ala Ser Ala
 35 40 45
 Gly Asn Ile Gly Glu Asp Gly Ile Leu Ser Cys Thr Phe Glu Pro
 50 55 60
 Asp Ile Lys Leu Ser Asp Ile Val Ile Gln Trp Leu Lys Glu Gly
 65 70 75
 Val Leu Gly Leu Val His Glu Phe Lys Glu Gly Lys Asp Glu Leu
 80 85 90
 Ser Glu Gln Asp Glu Met Phe Arg Gly Arg Thr Ala Val Phe Ala
 95 100 105
 Asp Gln Val Ile Val Gly Asn Ala Ser Leu Arg Leu Lys Asn Val
 110 115 120
 Gln Leu Thr Asp Ala Gly Thr Tyr Lys Cys Tyr Ile Ile Thr Ser
 125 130 135
 Lys Gly Lys Gly Asn Ala Asn Leu Glu Tyr Lys Thr Gly Ala Phe
 140 145 150
 Ser Met Pro Glu Val Asn Val Asp Tyr Asn Ala Ser Ser Glu Thr

gcccctgggc catgaagtgc tggcagtgag cggatggacc tagcacttcc 850
 cctctctggc cttagcttcc tcctctctta tggggataac agctacctca 900
 tggatcacaa taagagaaca agagtgaag agttttgtaa cttcaagtgc 950
 ctgttcagct gcgggggattt agcacaggag actctacgct caccctcagc 1000
 aacctttctg cccagcagc tctcttctg ctaacatctc aggctcccag 1050
 cccagccacc attactgtgg cctgatctgg actatcatgg tggcaggttc 1100
 catggactgc agaactccag ctgcatggaa agggccagct gcagactttg 1150
 agccagaaat gcaaacggga ggcctctggg actcagtcag agcgctttgg 1200
 ctgaatgagg ggtggaaccg agggagaag gtgcgtcggg gtggcagatg 1250
 caggaaatga gctgtctatt agccttgctt gccccacca tgaggtaggc 1300
 agaaatcctc actgccagcc cctcttaaac aggtagagag ctgtgagccc 1350
 cagccccacc tgactccagc acacctggcg agtagtagct gtcaataaat 1400
 ctatgtaaac agacaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1450
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 1484

<210> 293
 <211> 180
 <212> PRT
 <213> Homo sapiens

<400> 293
 Met Ala Ala Ser Leu Gly Gln Val Leu Ala Leu Val Leu Val Ala
 1 5 10 15
 Ala Leu Trp Gly Gly Thr Gln Pro Leu Leu Lys Arg Ala Ser Ala
 20 25 30
 Gly Leu Gln Arg Val His Glu Pro Thr Trp Ala Gln Gln Leu Leu
 35 40 45
 Gln Glu Met Lys Thr Leu Phe Leu Asn Thr Glu Tyr Leu Met Pro
 50 55 60
 Phe Leu Leu Asn Gln Cys Gly Ser Leu Leu Tyr Tyr Leu Thr Leu
 65 70 75
 Ala Ser Thr Asp Leu Thr Leu Ala Val Pro Ile Cys Asn Ser Leu
 80 85 90
 Ala Ile Ile Phe Thr Leu Ile Val Gly Lys Ala Leu Gly Glu Asp
 95 100 105
 Ile Gly Gly Lys Arg Lys Leu Asp Tyr Cys Glu Cys Gly Thr Gln
 110 115 120
 Leu Cys Gly Ser Arg His Thr Cys Val Ser Ser Phe Pro Glu Pro
 125 130 135
 Ile Ser Pro Glu Trp Val Arg Thr Arg Pro Phe Pro Ile Leu Pro
 140 145 150

Phe	Pro	Leu	Gln	Leu	Phe	Cys	Phe	Leu	Val	Ala	Ile	Arg	Val	Pro
			155						160					165
Phe	Pro	Trp	Thr	Val	Trp	Arg	Lys	Thr	Glu	Ala	Gly	Val	Trp	Asp
			170						175					180

<210> 294
 <211> 1164
 <212> DNA
 <213> Homo sapiens

<400> 294
 cttctgtagg acagtcacca ggccagatcc agaagcctct ctaggctcca 50
 gctttctctg tggaagatga cagcaattat agcaggaccc tgccaggctg 100
 tcgaaaagat tccgcaataa aactttgcca gtgggaagta cctagtgaaa 150
 cggcctaaga tgccacttct tctcatgtcc caggcttgag gccctgtggt 200
 ccccatcctt gggagaagtc agtccagca ccatgaaggg catcctcggt 250
 gctggtatca ctgcagtgtg tgttgacgtg gtagaatctc tgagctgcgt 300
 gcagtgtaat tcatgggaaa aatcctgtgt caacagcatt gcctctgaat 350
 gtccctcaca tgccaacacc agctgtatca gtcctcagc cagctcctct 400
 ctagagacac cagtcagatt ataccagaat atgttctgct cagcggagaa 450
 ctgcagtgtg gagacacaca ttacagcctt cactgtccac gtgtctgctg 500
 aagaacactt tcattttgta agccagtgtg gccaaggaaa ggaatgcagc 550
 aacaccagcg atgccctgga ccctcccctg aagaacgtgt ccagcaacgc 600
 agagtgcctt gcttgttatg aatctaattg aacttcctgt cgtgggaagc 650
 cctggaaatg ctatgaagaa gaacagtgtg tctttctagt tgcagaactt 700
 aagaatgaca ttgagtctaa gagtctcgtg ctgaaaggct gttccaacgt 750
 cagtaacgcc acctgtcagt tcctgtctgg tgaaaacaag actcttgag 800
 gagtcatctt tcgaaagttt gagtgtgcaa atgtaaacag ctttaacccc 850
 acgtctgcac caaccacttc ccacaacgtg ggctccaaag cttccctcta 900
 cctcttggcc cttgccagcc tccttcttcg gggactgctg ccctgaggtc 950
 ctggggctgc actttgccca gcacccatt tctgcttctc tgaggctcag 1000
 agcacccctt gcggtgctga caccctcttt ccctgctctg ccccgtttaa 1050
 ctgccagta agtgggagtc acaggtctcc aggcaatgcc gacagctgcc 1100
 ttgttcttca ttattaaagc actggttcat tcaactgcaa aaaaaaaaaa 1150
 aaaaaaaaaa aaaa 1164

<210> 295
 <211> 237
 <212> PRT

<213> Homo sapiens

<400> 295

Met	Lys	Gly	Ile	Leu	Val	Ala	Gly	Ile	Thr	Ala	Val	Leu	Val	Ala	
1				5					10					15	
Ala	Val	Glu	Ser	Leu	Ser	Cys	Val	Gln	Cys	Asn	Ser	Trp	Glu	Lys	
				20					25					30	
Ser	Cys	Val	Asn	Ser	Ile	Ala	Ser	Glu	Cys	Pro	Ser	His	Ala	Asn	
				35					40					45	
Thr	Ser	Cys	Ile	Ser	Ser	Ser	Ala	Ser	Ser	Ser	Leu	Glu	Thr	Pro	
				50					55					60	
Val	Arg	Leu	Tyr	Gln	Asn	Met	Phe	Cys	Ser	Ala	Glu	Asn	Cys	Ser	
				65					70					75	
Glu	Glu	Thr	His	Ile	Thr	Ala	Phe	Thr	Val	His	Val	Ser	Ala	Glu	
				80					85					90	
Glu	His	Phe	His	Phe	Val	Ser	Gln	Cys	Cys	Gln	Gly	Lys	Glu	Cys	
				95					100					105	
Ser	Asn	Thr	Ser	Asp	Ala	Leu	Asp	Pro	Pro	Leu	Lys	Asn	Val	Ser	
				110					115					120	
Ser	Asn	Ala	Glu	Cys	Pro	Ala	Cys	Tyr	Glu	Ser	Asn	Gly	Thr	Ser	
				125					130					135	
Cys	Arg	Gly	Lys	Pro	Trp	Lys	Cys	Tyr	Glu	Glu	Glu	Gln	Cys	Val	
				140					145					150	
Phe	Leu	Val	Ala	Glu	Leu	Lys	Asn	Asp	Ile	Glu	Ser	Lys	Ser	Leu	
				155					160					165	
Val	Leu	Lys	Gly	Cys	Ser	Asn	Val	Ser	Asn	Ala	Thr	Cys	Gln	Phe	
				170					175					180	
Leu	Ser	Gly	Glu	Asn	Lys	Thr	Leu	Gly	Gly	Val	Ile	Phe	Arg	Lys	
				185					190					195	
Phe	Glu	Cys	Ala	Asn	Val	Asn	Ser	Leu	Thr	Pro	Thr	Ser	Ala	Pro	
				200					205					210	
Thr	Thr	Ser	His	Asn	Val	Gly	Ser	Lys	Ala	Ser	Leu	Tyr	Leu	Leu	
				215					220					225	
Ala	Leu	Ala	Ser	Leu	Leu	Leu	Arg	Gly	Leu	Leu	Pro				
				230					235						

<210> 296

<211> 1245

<212> DNA

<213> Homo sapiens

<400> 296

ggcctcggtt caaacgaccc ggtgggtcta cagcgggaagg gagggagcga 50
 aggtaggagg cagggcttgc ctactggcc accctcccaa cccaagagc 100
 ccagcccat ggtccccgcc gccggcgcgc tgctgtgggt cctgctgctg 150

aatctgggtc cccgggcggc gggggcccaa ggctgaccc agactccgac 200
 cgaaatgcag cgggtcagtt tacgctttgg gggcccatg acccgagct 250
 accggagcac cgcccggaact ggtcttcccc ggaagacaag gataatccta 300
 gaggacgaga atgatgccat ggccgacgcc gaccgcctgg ctggaccagc 350
 ggctgccgag ctcttgccg ccacgggtgtc caccggcttt agccggtcgt 400
 ccgccattaa cgaggaggat gggctttcag aagaggggggt tgtgattaat 450
 gccgaaagg atagcaccag cagagagctt cccagtgcga ctccaatac 500
 agcggggagt tccagcacga ggtttatagc caatagtcag gagcctgaaa 550
 tcaggctgac ttcaagcctg ccgcgctccc cggggaggtc tactgaggac 600
 ctgccaggct cgcaggccac cctgagccag tgggtccacac ctgggtctac 650
 cccgagccgg tggccgtcac cctcaccac agccatgcca tctcctgagg 700
 atctgcccgt ggtgctgatg ccttggggcc cgtggcaactg ccaactgcaag 750
 tcgggcacca tgagccggag ccggtctggg aagctgcacg gcctttccgg 800
 gcgccttcga gttggggcgc tgagccagct ccgcacggag cacaagcctt 850
 gcacctatca acaatgtccc tgcaaccgac ttcggaaga gtgccccctg 900
 gacacaagtc tctgtactga caccaactgt gcctctcaga gcaccaccag 950
 taccaggacc accactaccc ccttccccac catccacctc agaagcagtc 1000
 ccagcctgcc acccgccagc ccttgcccag ccttggcttt ttggaaacgg 1050
 gtcaggattg gcctggagga tatttgaat agcctctctt cagtgttcac 1100
 agagatgcaa ccaatagaca gaaaccagag gtaatggcca cttcatccac 1150
 atgaggagat gtcagtatct caacctctct tgccttttca atcctagcac 1200
 ccactagata tttttagtag agaaaaacaa aactggaaaa cacaa 1245

<210> 297
 <211> 341
 <212> PRT
 <213> Homo sapiens

<400> 297
 Met Val Pro Ala Ala Gly Ala Leu Leu Trp Val Leu Leu Leu Asn
 1 5 10 15
 Leu Gly Pro Arg Ala Ala Gly Ala Gln Gly Leu Thr Gln Thr Pro
 20 25 30
 Thr Glu Met Gln Arg Val Ser Leu Arg Phe Gly Gly Pro Met Thr
 35 40 45
 Arg Ser Tyr Arg Ser Thr Ala Arg Thr Gly Leu Pro Arg Lys Thr
 50 55 60
 Arg Ile Ile Leu Glu Asp Glu Asn Asp Ala Met Ala Asp Ala Asp

	65	70	75
Arg Leu Ala Gly Pro	Ala Ala Ala Glu	Leu Leu Ala Ala Thr	Val
	80	85	90
Ser Thr Gly Phe Ser	Arg Ser Ser Ala	Ile Asn Glu Glu Asp	Gly
	95	100	105
Ser Ser Glu Glu Gly	Val Val Ile Asn	Ala Gly Lys Asp Ser	Thr
	110	115	120
Ser Arg Glu Leu Pro	Ser Ala Thr Pro	Asn Thr Ala Gly Ser	Ser
	125	130	135
Ser Thr Arg Phe Ile	Ala Asn Ser Gln	Glu Pro Glu Ile Arg	Leu
	140	145	150
Thr Ser Ser Leu Pro	Arg Ser Pro Gly	Arg Ser Thr Glu Asp	Leu
	155	160	165
Pro Gly Ser Gln Ala	Thr Leu Ser Gln	Trp Ser Thr Pro Gly	Ser
	170	175	180
Thr Pro Ser Arg Trp	Pro Ser Pro Ser	Pro Thr Ala Met Pro	Ser
	185	190	195
Pro Glu Asp Leu Arg	Leu Val Leu Met	Pro Trp Gly Pro Trp	His
	200	205	210
Cys His Cys Lys Ser	Gly Thr Met Ser	Arg Ser Arg Ser Gly	Lys
	215	220	225
Leu His Gly Leu Ser	Gly Arg Leu Arg	Val Gly Ala Leu Ser	Gln
	230	235	240
Leu Arg Thr Glu His	Lys Pro Cys Thr	Tyr Gln Gln Cys Pro	Cys
	245	250	255
Asn Arg Leu Arg Glu	Glu Cys Pro Leu	Asp Thr Ser Leu Cys	Thr
	260	265	270
Asp Thr Asn Cys Ala	Ser Gln Ser Thr	Thr Ser Thr Arg Thr	Thr
	275	280	285
Thr Thr Pro Phe Pro	Thr Ile His Leu	Arg Ser Ser Pro Ser	Leu
	290	295	300
Pro Pro Ala Ser Pro	Cys Pro Ala Leu	Ala Phe Trp Lys Arg	Val
	305	310	315
Arg Ile Gly Leu Glu	Asp Ile Trp Asn	Ser Leu Ser Ser Val	Phe
	320	325	330
Thr Glu Met Gln Pro	Ile Asp Arg Asn	Gln Arg	
	335	340	

<210> 298

<211> 2692

<212> DNA

<213> Homo sapiens

<400> 298

cccgggtcga cccacgcgtc cggggagaaa ggatggccgg cctggcggcg 50

cggttggtcc tgctagctgg ggcagcggcg ctggcgagcg gctcccaggg 100
 cgaccgtgag ccggtgtacc gcgactgcgt actgcagtgc gaagagcaga 150
 actgctctgg gggcgctctg aatcacttcc gctcccgcca gccaatctac 200
 atgagtctag caggctggac ctgtcgggac gactgtaagt atgagtgtat 250
 gtgggtcacc gttgggctct acctccagga aggtcacaaa gtgcctcagt 300
 tccatggcaa gtggcccttc tcccggttcc tgttctttca agagccggca 350
 tcggccgtgg cctcgtttct caatggcctg gccagcctgg tgatgctctg 400
 ccgctaccgc accttcgtgc cagcctcctc ccccatgtac cacacctgtg 450
 tggccttcgc ctgggtgtcc ctcaatgcat ggttctggtc cacagtcttc 500
 cacaccaggg aactgacct cacagagaaa atggactact tctgtgcctc 550
 cactgtcatc ctacactcaa tctacctgtg ctgcgtcagg accgtggggc 600
 tgcagcaccg agctgtggtc agtgccttcc gggtctcct gctgctcatg 650
 ctgaccgtgc acgtctccta cctgagcctc atccgcttcg actatggcta 700
 caacctggtg gccaacgtgg ctattggcct ggtcaacgtg gtgtggtggc 750
 tggcctggtg cctgtggaac cagcggcggc tgctcacgt gcgcaagtgc 800
 gtggtggtgg tcttgctgct gcaggggctg tccctgctcg agctgcttga 850
 ctcccaccg ctcttctggg tcctggatgc ccatgccatc tggcacatca 900
 gcaccatccc tgtccacgtc ctctttttca gctttctgga agatgacagc 950
 ctgtacctgc tgaaggaatc agaggacaag ttcaagctgg actgaagacc 1000
 ttggagcgag tctgccccag tggggatcct gcccccgccc tgctggcctc 1050
 ccttctcccc tcaacccttg agatgatttt ctcttttcaa cttcttgaac 1100
 ttggacatga aggatgtggg ccagaaatca tgtggccagc ccaccccctg 1150
 ttggccctca ccagccttgg agtctgttct agggaaaggc tcccagcatc 1200
 tgggactcga gagtgggcag cccctctacc tcctggagct gaactggggt 1250
 ggaactgagt gtgttcttag ctctaccggg aggacagctg cctgtttcct 1300
 ccccaccagc ctctcccca catccccagc tgcttggtg ggtcctgaag 1350
 ccctctgtct acctgggaga ccagggacca caggccttag ggatacaggg 1400
 ggtccccttc tgttaccacc ccccaccctc ctccaggaca ccactaggtg 1450
 gtgctggatg cttgttcttt ggccagccaa ggttcacggc gattctcccc 1500
 atgggatctt gagggaccaa gctgctggga ttgggaagga gtttcacocct 1550
 gaccgttgcc ctagccaggt tcccaggagg cctcaccata ctccccttca 1600
 gggccagggc tccagcaagc ccagggcaag gatcctgtgc tgctgtctgg 1650

ttgagagcct gccaccgtgt gtcgggagtg tgggcccaggc tgagtgcata 1700
 ggtgacaggg ccgtgagcat gggcctgggt gtgtgtgagc tcaggcctag 1750
 gtgcgcagtg tggagacggg tgttgtcggg gaagaggtgt ggcttcaaag 1800
 tgtgtgtgtg caggggggtg gtgtgttagc gtgggttagg ggaacgtgtg 1850
 tgcgcggtgt ggtgggcatg tgagatgagt gactgccggt gaatgtgtcc 1900
 acagttgaga ggttgaggca ggatgaggga atcctgtcac catcaataat 1950
 cacttggtga gcgccagctc tgcccagac gccacctggg cggacagcca 2000
 ggagctctcc atggccaggc tgccgtgtgt catgttccct gtctgggtgcc 2050
 cctttgcccg cctcctgcaa acctcacagg gtccccacac aacagtgtcc 2100
 tccagaagca gcccctcgga ggcagaggaa ggaaaatggg gatggctggg 2150
 gctctctcca tcctcctttt ctccctgctc tcgcatggct ggccttcccc 2200
 tccaaaacct ccattcccct gctgccagcc cctttgccat agcctgattt 2250
 tggggaggag gaagggcgga tttgagggag aaggggagaa agcttatggc 2300
 tgggtctggt ttcttccctt cccagagggt cttactgttc caggggtggc 2350
 ccagggcagg caggggccac actatgcctg tgccctggta aaggtgacct 2400
 ctgccattta ccagcagccc tggcatgttc ctgccccaca ggaatagaat 2450
 ggaggagct ccagaaactt tccatcccaa aggcagtctc cgtgggtgaa 2500
 gcagactgga tttttgctct gccctgacc ccttgtccct ctttgaggga 2550
 ggggagctat gctaggactc caacctcagg gactcgggtg gcctgcgcta 2600
 gcttcttttg atactgaaaa cttttaaggt gggaggggtg caagggatgt 2650
 gcttaataaa tcaattccaa gcctcaaaaa aaaaaaaaaa aa 2692

<210> 299
 <211> 320
 <212> PRT
 <213> Homo sapiens

<400> 299
 Met Ala Gly Leu Ala Ala Arg Leu Val Leu Leu Ala Gly Ala Ala
 1 5 10 15
 Ala Leu Ala Ser Gly Ser Gln Gly Asp Arg Glu Pro Val Tyr Arg
 20 25 30
 Asp Cys Val Leu Gln Cys Glu Glu Gln Asn Cys Ser Gly Gly Ala
 35 40 45
 Leu Asn His Phe Arg Ser Arg Gln Pro Ile Tyr Met Ser Leu Ala
 50 55 60
 Gly Trp Thr Cys Arg Asp Asp Cys Lys Tyr Glu Cys Met Trp Val
 65 70 75

Thr	Val	Gly	Leu	Tyr	Leu	Gln	Glu	Gly	His	Lys	Val	Pro	Gln	Phe	
				80					85					90	
His	Gly	Lys	Trp	Pro	Phe	Ser	Arg	Phe	Leu	Phe	Phe	Gln	Glu	Pro	
				95					100					105	
Ala	Ser	Ala	Val	Ala	Ser	Phe	Leu	Asn	Gly	Leu	Ala	Ser	Leu	Val	
				110					115					120	
Met	Leu	Cys	Arg	Tyr	Arg	Thr	Phe	Val	Pro	Ala	Ser	Ser	Pro	Met	
				125					130					135	
Tyr	His	Thr	Cys	Val	Ala	Phe	Ala	Trp	Val	Ser	Leu	Asn	Ala	Trp	
				140					145					150	
Phe	Trp	Ser	Thr	Val	Phe	His	Thr	Arg	Asp	Thr	Asp	Leu	Thr	Glu	
				155					160					165	
Lys	Met	Asp	Tyr	Phe	Cys	Ala	Ser	Thr	Val	Ile	Leu	His	Ser	Ile	
				170					175					180	
Tyr	Leu	Cys	Cys	Val	Arg	Thr	Val	Gly	Leu	Gln	His	Pro	Ala	Val	
				185					190					195	
Val	Ser	Ala	Phe	Arg	Ala	Leu	Leu	Leu	Leu	Met	Leu	Thr	Val	His	
				200					205					210	
Val	Ser	Tyr	Leu	Ser	Leu	Ile	Arg	Phe	Asp	Tyr	Gly	Tyr	Asn	Leu	
				215					220					225	
Val	Ala	Asn	Val	Ala	Ile	Gly	Leu	Val	Asn	Val	Val	Trp	Trp	Leu	
				230					235					240	
Ala	Trp	Cys	Leu	Trp	Asn	Gln	Arg	Arg	Leu	Pro	His	Val	Arg	Lys	
				245					250					255	
Cys	Val	Val	Val	Val	Leu	Leu	Leu	Gln	Gly	Leu	Ser	Leu	Leu	Glu	
				260					265					270	
Leu	Leu	Asp	Phe	Pro	Pro	Leu	Phe	Trp	Val	Leu	Asp	Ala	His	Ala	
				275					280					285	
Ile	Trp	His	Ile	Ser	Thr	Ile	Pro	Val	His	Val	Leu	Phe	Phe	Ser	
				290					295					300	
Phe	Leu	Glu	Asp	Asp	Ser	Leu	Tyr	Leu	Leu	Lys	Glu	Ser	Glu	Asp	
				305					310					315	
Lys	Phe	Lys	Leu	Asp											
				320											

<210> 300
 <211> 1674
 <212> DNA
 <213> Homo sapiens

<400> 300
 ggccgcctgg aattgtggga gttgtgtctg ccactcggct gccggaggcc 50
 gaagggtccgt gactatggct ccccagagcc tgccttcac taggatggct 100
 cctctgggca tgctgcttgg gctgctgatg gccgcctgct tcaccttctg 150

cctcagtcac cagaacctga aggagtttgc cctgaccaac ccagagaaga 200
gcagcaccaa agaaacggag agaaaagaaa ccaaagccga ggaggagctg 250
gatgccgaag tcctggaggt gttccacccg acgcatgagt ggcaggccct 300
tcagccaggg caggctgtcc ctgcaggatc ccacgtacgg ctgaatcttc 350
agactgggga aagagaggca aaactccaat atgaggacaa gttccgaaat 400
aatttgaaag gcaaaaggct ggatatcaac accaacacct acacatctca 450
ggatctcaag agtgcactgg caaaattcaa ggagggggca gagatggaga 500
gttcaaagga agacaaggca aggcaggctg aggtaaagcg gctcttccgc 550
cccattgagg aactgaagaa agactttgat gagctgaatg ttgtcattga 600
gactgacatg cagatcatgg tacggctgat caacaagtcc aatagttcca 650
gctccagttt ggaagagaag attgctgcgc tctttgatct tgaatattat 700
gtccatcaga tggacaatgc gcaggacctg ctttcctttg gtggtcttca 750
agtggatgat aatgggctga acagcacaga gccctcgtg aaggagtatg 800
ctgcgtttgt gctgggctg gccttttcca gcaaccccaa ggtccaggctg 850
gaggccatcg aagggggagc cctgcagaag ctgctggtca tcctggccac 900
ggagcagccg ctactgcaa agaagaaggt cctgtttgca ctgtgctccc 950
tgctgcgcca cttcccctat gccagcggc agttcctgaa gctcgggggg 1000
ctgcaggctc tgaggacct ggtgcaggag aagggcacgg aggtgctcgc 1050
cgtgcgcgtg gtcacactgc tctacgacct ggtcacggag aagatgttcg 1100
ccgaggagga ggctgagctg acccaggaga tgtccccaga gaagctgcag 1150
cagtatcgcc aggtacacct cctgccaggc ctgtgggaac agggctggtg 1200
cgagatcacg gccacctcc tggcgtgcc cgagcatgat gcccgtaga 1250
aggtgctgca gacactgggc gtccctctga ccacctgccg ggaccgctac 1300
cgtcaggacc ccagctcgg caggacactg gccagcctgc aggtgagta 1350
ccaggtgctg gccagcctgg agctgcagga tggtagaggac gagggctact 1400
tccaggagct gctgggctct gtcaacagct tgctgaagga gctgagatga 1450
ggccccacac caggactgga ctgggatgcc gctagtgagg ctgaggggtg 1500
ccagcgtggg tgggcttctc aggcaggagg acatcttggc agtgctggct 1550
tggccattaa atggaaacct gaaggccaaa aaaaaaaaaa aaaaaaaaaa 1600
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1650
aaaaaaaaaa aaaaaaaaaa aaaa 1674

<210> 301

<211> 461
 <212> PRT
 <213> Homo sapiens

<400> 301

Met	Ala	Pro	Gln	Ser	Leu	Pro	Ser	Ser	Arg	Met	Ala	Pro	Leu	Gly	1	5	10	15
Met	Leu	Leu	Gly	Leu	Leu	Met	Ala	Ala	Cys	Phe	Thr	Phe	Cys	Leu	20	25	30	
Ser	His	Gln	Asn	Leu	Lys	Glu	Phe	Ala	Leu	Thr	Asn	Pro	Glu	Lys	35	40	45	
Ser	Ser	Thr	Lys	Glu	Thr	Glu	Arg	Lys	Glu	Thr	Lys	Ala	Glu	Glu	50	55	60	
Glu	Leu	Asp	Ala	Glu	Val	Leu	Glu	Val	Phe	His	Pro	Thr	His	Glu	65	70	75	
Trp	Gln	Ala	Leu	Gln	Pro	Gly	Gln	Ala	Val	Pro	Ala	Gly	Ser	His	80	85	90	
Val	Arg	Leu	Asn	Leu	Gln	Thr	Gly	Glu	Arg	Glu	Ala	Lys	Leu	Gln	95	100	105	
Tyr	Glu	Asp	Lys	Phe	Arg	Asn	Asn	Leu	Lys	Gly	Lys	Arg	Leu	Asp	110	115	120	
Ile	Asn	Thr	Asn	Thr	Tyr	Thr	Ser	Gln	Asp	Leu	Lys	Ser	Ala	Leu	125	130	135	
Ala	Lys	Phe	Lys	Glu	Gly	Ala	Glu	Met	Glu	Ser	Ser	Lys	Glu	Asp	140	145	150	
Lys	Ala	Arg	Gln	Ala	Glu	Val	Lys	Arg	Leu	Phe	Arg	Pro	Ile	Glu	155	160	165	
Glu	Leu	Lys	Lys	Asp	Phe	Asp	Glu	Leu	Asn	Val	Val	Ile	Glu	Thr	170	175	180	
Asp	Met	Gln	Ile	Met	Val	Arg	Leu	Ile	Asn	Lys	Phe	Asn	Ser	Ser	185	190	195	
Ser	Ser	Ser	Leu	Glu	Glu	Lys	Ile	Ala	Ala	Leu	Phe	Asp	Leu	Glu	200	205	210	
Tyr	Tyr	Val	His	Gln	Met	Asp	Asn	Ala	Gln	Asp	Leu	Leu	Ser	Phe	215	220	225	
Gly	Gly	Leu	Gln	Val	Val	Ile	Asn	Gly	Leu	Asn	Ser	Thr	Glu	Pro	230	235	240	
Leu	Val	Lys	Glu	Tyr	Ala	Ala	Phe	Val	Leu	Gly	Ala	Ala	Phe	Ser	245	250	255	
Ser	Asn	Pro	Lys	Val	Gln	Val	Glu	Ala	Ile	Glu	Gly	Gly	Ala	Leu	260	265	270	
Gln	Lys	Leu	Leu	Val	Ile	Leu	Ala	Thr	Glu	Gln	Pro	Leu	Thr	Ala	275	280	285	
Lys	Lys	Lys	Val	Leu	Phe	Ala	Leu	Cys	Ser	Leu	Leu	Arg	His	Phe				

<210> 303
 <211> 247
 <212> PRT
 <213> Homo sapiens

<400> 303
 Met Gly Ala Ala Val Phe Phe Gly Cys Thr Phe Val Ala Phe Gly
 1 5 10 15
 Pro Ala Phe Ala Leu Phe Leu Ile Thr Val Ala Gly Asp Pro Leu
 20 25 30
 Arg Val Ile Ile Leu Val Ala Gly Ala Phe Phe Trp Leu Val Ser
 35 40 45
 Leu Leu Leu Ala Ser Val Val Trp Phe Ile Leu Val His Val Thr
 50 55 60
 Asp Arg Ser Asp Ala Arg Leu Gln Tyr Gly Leu Leu Ile Phe Gly
 65 70 75
 Ala Ala Val Ser Val Leu Leu Gln Glu Val Phe Arg Phe Ala Tyr
 80 85 90
 Tyr Lys Leu Leu Lys Lys Ala Asp Glu Gly Leu Ala Ser Leu Ser
 95 100 105
 Glu Asp Gly Arg Ser Pro Ile Ser Ile Arg Gln Met Ala Tyr Val
 110 115 120
 Ser Gly Leu Ser Phe Gly Ile Ile Ser Gly Val Phe Ser Val Ile
 125 130 135
 Asn Ile Leu Ala Asp Ala Leu Gly Pro Gly Val Val Gly Ile His
 140 145 150
 Gly Asp Ser Pro Tyr Tyr Phe Leu Thr Ser Ala Phe Leu Thr Ala
 155 160 165
 Ala Ile Ile Leu Leu His Thr Phe Trp Gly Val Val Phe Phe Asp
 170 175 180
 Ala Cys Glu Arg Arg Arg Tyr Trp Ala Leu Gly Leu Val Val Gly
 185 190 195
 Ser His Leu Leu Thr Ser Gly Leu Thr Phe Leu Asn Pro Trp Tyr
 200 205 210
 Glu Ala Ser Leu Leu Pro Ile Tyr Ala Val Thr Val Ser Met Gly
 215 220 225
 Leu Trp Ala Phe Ile Thr Ala Gly Gly Ser Leu Arg Ser Ile Gln
 230 235 240
 Arg Ser Leu Leu Cys Lys Asp
 245

<210> 304
 <211> 240
 <212> DNA
 <213> Homo sapiens

<220>

<221> unsure
<222> 108, 123, 126, 154, 198, 206, 217
<223> unknown base

<400> 304
aagctggttt aaggaagcag aggaggggta gattcgttga gtgaggacgg 50
aagatcaacc catttccatt ccgccagatg gcctatgttt ctggtctctc 100
ccttcggnat catcagtggg gtnttntctg ttatcaatat tttggctgat 150
gcanttgggc cagggtgtggg tgggatccat ggagactcac cctattantt 200
cctganttca gccttnttga cagcagccat tatcctgctc 240

<210> 305
<211> 378
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 58, 94, 132, 186, 191, 220, 240, 248, 280, 311, 332
<223> unknown base

<400> 305
gaccgaccgt tcagatgccg ggttccagta cggcttcctg atttttggtg 50
ctgctgtntc tgtccttcta caggaggtgt tccgctttgc ctantacaag 100
ctgcttaaga aggcagatga ggggtagca tngctgagtg aggacggaag 150
atcacccatt tccatccgcc agatggccta tgttnttggg ntttccttcg 200
gtatcatcag tgggtgtttt tctgttatca atattttggn tgatgcantt 250
gggccagggtg tgggtgggat ccatggagan tcaccctatt aattcctgaa 300
ttcagccttt ntgacagcag ccattatcct gntccatacc ttttggggag 350
ttgtgttttt tgatgcctgt gagaggag 378

<210> 306
<211> 655
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 1, 22, 129, 133, 184
<223> unknown base

<400> 306
ngttggagaa gtggcgcgga cnttcatttg gggtttcggt ttccccctt 50
tccctttccc cggggtctgg ggtgacattg cacgggcccc tcgtggggtc 100
gcgttgccac ccacgcgga ctccccagnt ggnngccct tccatttgc 150
ctgtcctggg caggccccca ccccccttc cacntgacca gccatggggg 200
ctgcggtgtt tttcggctgc actttcgtcg cgttcggccc ggccttcgcg 250

cttttcttga tcaactgtggc tggggaccog cttogcggtta tcatcctggt 300
 cgcaggggca tttttctggc tgggtctccct gctcctggcc tctgtggtct 350
 ggttcatctt ggtccatgtg accgaccggt cagatgcccg gctccagtac 400
 ggcctcctga tttttggtgc tgctgtctct gtccttctac aggaggtgtt 450
 ccgctttgcc tactacaagc tgcttaagaa ggcagatgag gggtttagcat 500
 cgctgagtga ggacggaaga tcacccatct ccatccgcca gatggcctat 550
 gtttctggtc tctccttcgg tatcatcagt ggtgtcttct ctgttatcaa 600
 tattttggct gatgcacttg ggccaggtgt ggttgggatc catggagact 650
 cacco 655

<210> 307
 <211> 650
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 52, 89, 128
 <223> unknown base

<400> 307
 gtaaaagaaa gtggccggac cttcattggg gtttcgggtc cccctttcc 50
 cnttccccgg ggtctggggg tgacattgca ccgcgccent cgtgggggtcg 100
 cgttgccacc ccacgcgga cccccagntg gcgcgccctt cccatttgcc 150
 tgtcctggtc agggcccccac ccccttccc acctgaccag ccatgggggc 200
 tgcgggtgtt ttggggctgc actttcgctc cgttcgggac cggccttcgc 250
 gcttttcttg atcaactgtg ctggggaccc gcttcgcgtt atcatcctgg 300
 tcgcaggggc atttttctgg ctgggtctccc tgctcctggc ctctgtggtc 350
 tggttcatct tgggtccatgt gaccgaccgg tcagatgccc ggtccagta 400
 cggcctcctg atttttggtg ctgctgtctc tgccttcta caggaggtgt 450
 tccgctttgc ctactacaag ctgcttaaga aggcagatga ggggttagca 500
 tcgctgagtg aggacggaag atcacccatc tccatccgcc agatggccta 550
 tgtttctggt ctctccttcg gtatcatcag tgggtgtctt tctgttatca 600
 atattttggc tgatgcactt gggccaggtg tggttgggat ccatggagac 650

<210> 308
 <211> 1570
 <212> DNA
 <213> Homo sapiens

<400> 308
 gccccaggga gcagtgggtg gttataactc agggccggtg cccagagccc 50

aggaggaggc agtggccagg aaggcacagg cctgagaagt ctgcggtga 100
gctgggagca aatccccac ccctacctg ggggacaggg caagtgagac 150
ctggtgaggg tggctcagca ggcagggaag gagaggtgtc tgtgcgtcct 200
gcacccacat ctttctctgt ccctccttg ccctgtctgg aggctgctag 250
actcctatct tctgaattct atagtgcctg ggtctcagcg cagtgccgat 300
ggtggcccggt ccttgtggtt cctctctacc tggggaaata aggtgcagcg 350
gcatggcta cagcaagacc ccctggatg tgggtgctct gtgctctgat 400
cacagccttg cttctggggg tcacagagca tgttctcgcc aacaatgatg 450
tttctgtga ccacccctct aacaccgtgc cctctgggag caaccaggac 500
ctgggagctg gggccgggga agacgcccgg tcggatgaca gcagcagccg 550
catcatcaat ggatccgact gcgatatgca caccagccg tggcaggccg 600
cgctgttgct aaggcccaac cagctctact gcggggcggt gttggtgcat 650
ccacagtggc tgctcacggc cgccactgc aggaagaaag ttttcagagt 700
ccgtctcggc cactactccc tgtcaccagt ttatgaatct gggcagcaga 750
tgttccaggg ggtcaaatcc atccccacc ctggctactc ccacctggc 800
cactctaacg acctcatgct catcaaactg aacagaagaa ttogtccac 850
taaagatgtc agaccatca acgtctctc tcattgtccc tctgctggga 900
caaagtgtt ggtgtctggc tgggggacaa ccaagagccc ccaagtgcac 950
ttccctaagg tcctccagt cttgaatatc agcgtgctaa gtcagaaaag 1000
gtgcgaggat gcttaccga gacagataga tgacaccatg ttctgcgccg 1050
gtgacaaagc aggtagagac tcctgccagg gtgattctgg ggggcctgtg 1100
gtctgcaatg gctccctgca gggactcgtg tcctggggag attacccttg 1150
tgcccgccc aacagaccg gtgtctacac gaacctctgc aagttcacca 1200
agtggatcca ggaaccatc caggccaact cctgagtcac ccaggactc 1250
agcacaccg catccccacc tgctgcaggg acagccctga cactcctttc 1300
agaccctcat tccttcccag agatgttgag aatgttcatc tctccagccc 1350
ctgaccccat gtctcctgga ctacgggtct gcttccccca cattgggctg 1400
accgtgtctc tctagttgaa ccctgggaac aatttccaaa actgtccagg 1450
gcggggggtt cgtctcaatc tcctggggc actttcatcc tcaagctcag 1500
ggcccatccc ttctctgcag ctctgaccca aatttagtcc cagaaataaa 1550
ctgagaagtg gaaaaaaaaa 1570

<210> 309

Met 1	Ala	Thr	Ala	Arg 5	Pro	Pro	Trp	Met	Trp 10	Val	Leu	Cys	Ala	Leu 15
Ile	Thr	Ala	Leu	Leu 20	Leu	Gly	Val	Thr	Glu 25	His	Val	Leu	Ala	Asn 30
Asn	Asp	Val	Ser	Cys 35	Asp	His	Pro	Ser	Asn 40	Thr	Val	Pro	Ser	Gly 45
Ser	Asn	Gln	Asp	Leu 50	Gly	Ala	Gly	Ala	Gly 55	Glu	Asp	Ala	Arg	Ser 60
Asp	Asp	Ser	Ser	Ser 65	Arg	Ile	Ile	Asn	Gly 70	Ser	Asp	Cys	Asp	Met 75
His	Thr	Gln	Pro	Trp 80	Gln	Ala	Ala	Leu	Leu 85	Leu	Arg	Pro	Asn	Gln 90
Leu	Tyr	Cys	Gly	Ala 95	Val	Leu	Val	His	Pro 100	Gln	Trp	Leu	Leu	Thr 105
Ala	Ala	His	Cys	Arg 110	Lys	Lys	Val	Phe	Arg 115	Val	Arg	Leu	Gly	His 120
Tyr	Ser	Leu	Ser	Pro 125	Val	Tyr	Glu	Ser	Gly 130	Gln	Gln	Met	Phe	Gln 135
Gly	Val	Lys	Ser	Ile 140	Pro	His	Pro	Gly	Tyr 145	Ser	His	Pro	Gly	His 150
Ser	Asn	Asp	Leu	Met 155	Leu	Ile	Lys	Leu	Asn 160	Arg	Arg	Ile	Arg	Pro 165
Thr	Lys	Asp	Val	Arg 170	Pro	Ile	Asn	Val	Ser 175	Ser	His	Cys	Pro	Ser 180
Ala	Gly	Thr	Lys	Cys 185	Leu	Val	Ser	Gly	Trp 190	Gly	Thr	Thr	Lys	Ser 195
Pro	Gln	Val	His	Phe 200	Pro	Lys	Val	Leu	Gln 205	Cys	Leu	Asn	Ile	Ser 210
Val	Leu	Ser	Gln	Lys 215	Arg	Cys	Glu	Asp	Ala 220	Tyr	Pro	Arg	Gln	Ile 225
Asp	Asp	Thr	Met	Phe 230	Cys	Ala	Gly	Asp	Lys 235	Ala	Gly	Arg	Asp	Ser 240
Cys	Gln	Gly	Asp	Ser 245	Gly	Gly	Pro	Val	Val 250	Cys	Asn	Gly	Ser	Leu 255
Gln	Gly	Leu	Val	Ser 260	Trp	Gly	Asp	Tyr	Pro 265	Cys	Ala	Arg	Pro	Asn 270
Arg	Pro	Gly	Val	Tyr 275	Thr	Asn	Leu	Cys	Lys 280	Phe	Thr	Lys	Trp	Ile 285
Gln	Glu	Thr	Ile	Gln	Ala	Asn	Ser							

<210> 310
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 310
 tcctgtgacc acccctctaa cacc 24

<210> 311
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 311
 ctggaacatc tgctgcccag attc 24

<210> 312
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 312
 gtcggatgac agcagcagcc gcatcatcaa tggatccgac tgcgatatgc 50

<210> 313
 <211> 3010
 <212> DNA
 <213> Homo sapiens

<400> 313
 atggtcaacg accggtggaa gaccatgggc ggcgctgccc aacttgagga 50
 ccggccgcgc gacaagccgc agcggccgag ctgcggctac gtgctgtgca 100
 ccgtgctgct ggccctggct gtgctgctgg ctgtagctgt caccggtgcc 150
 gtgctcttcc tgaaccacgc ccacgcgccg ggcacggcgc cccacctgt 200
 cgtcagcact ggggctgcca gcgccaacag cgccctggtc actgtggaaa 250
 gggcggacag ctgcacctc agcatcctca ttgaccogcg ctgccccgac 300
 ctcaccgaca gcttcgcacg cctggagagc gccacggcct cgggtgctgca 350
 ggcgctgaca gagcaccagg ccagccacg gctggtgggc gaccaggagc 400
 aggagctgct ggacacgctg gccgaccagc tgccccggct gctggcccga 450
 gcctcagagc tgcagacgga gtgcatgggg ctgcggaagg ggcattggcac 500
 gctgggccag ggcctcagcg ccctgcagag tgagcagggc cgcctcatcc 550

agctttctctc tgagagccag ggccacatgg ctacactggt gaactccgtc 600
 agcgacatcc tggatgccct gcagagggac cgggggctgg gccggccccg 650
 caacaaggcc gaccttcaga gagcgctgc ccggggaacc cggccccggg 700
 gctgtgccac tggctcccgg ccccgagact gtctggacgt cctcctaagc 750
 ggacagcagg acgatggcgt ctactctgtc tttcccaccc actaccggc 800
 cggcttcacg gtgtactgtg acatgcgcac ggacggcggc ggctggacgg 850
 tgtttcagcg ccgggaggac ggctccgtga acttcttccg gggctgggac 900
 gcgtaccgag acggcttttg caggctcacc ggggagcact ggctagggct 950
 caagaggatc cacgccctga ccacacaggc tgcctacgag ctgcacgtgg 1000
 acctggagga ctttgagaat ggcacggcct atgcccgtta cgggagcttc 1050
 ggcgtgggct tgttctccgt ggaccctgag gaagacgggt acccgctcac 1100
 cgtggctgac tattccggca ctgcaggcga ctccctcttg aagcacagcg 1150
 gcatgagggt caccaccaag gaccgtgaca gcgaaccattc agagaacaac 1200
 tgtgccgcct tctaccgcg tgcctggtgg taccgcaact gccacacgtc 1250
 caacctcaat gggcagtacc tgcgcggtgc gcacgcctcc tatgccgacg 1300
 gcgtggagtg gtccctcctgg accggtctggc agtactcact caagttctct 1350
 gagatgaaga tccggccggt ccgggaggac cgctagactg gtgcaccttg 1400
 tccttgcccc tgctggctcc tgtcgcccca tccccgacct cacctcactc 1450
 tttcgtgaat gttctccacc cacctgtgcc tggcggaacc actctccagt 1500
 agggaggggc cgggcatcc ctgacacgaa gctccctggg ccggtgaagt 1550
 cacacatcgc cttctcgccg tccccacccc ctccatttgg cagctcactg 1600
 atctcttgcc tctgctgatg ggggctggca aacttgacga ccccaactcc 1650
 tgcctgcccc cactgtgact ccggtgctgt ttgccgtccc ctggccagga 1700
 tgggtggagtc tgccccaggc accctctgcc ctgcccggcc aaatacccgg 1750
 cattatgggg acagagagca gggggcagac agcacccttg gagtcctcct 1800
 agcagatcgt ggggaatgtc aggtctctct gaggtcaggt ctgaggccag 1850
 tatcctccag ccctcccaat gccaaccccc acccogtttc cctggtgccc 1900
 agagaacca cctctcccc aagggcctca gcctggctgt gggctgggtg 1950
 gccccatcct accaggccct gaggtcagga tggggagctg ctgccttttg 2000
 ggaccacgc tccaaggctg agaccagttc cctggaggcc acccaccctg 2050
 tgccccggca ggctgggggt ctgcagtcct cttacctgct gtgcccacct 2100
 gctctctgtc tcaaatgagg cccaacccat cccccacca gctcccggcc 2150

gtcctcctac ctggggcagc cggggctgcc atcccatthc tcctgcctct 2200
 ggaaggtggg tggggccctg caccgtgggg ctggactgcg ctaatgggaa 2250
 gctcttggtt ttctgggctg gggcctaggg agggctggga tgagggttgt 2300
 acaacccccca ccaccaattht cccagggact ccagggctcct gaggcctccc 2350
 aggagggcct tgggggtgat gacccttccc ctgaggtggc tgtctccatg 2400
 aggaggccaa cccttgccat tgaccgtggc cacctggacc caggccaggc 2450
 ccggcccggc gagggtgcaa gggacaggga ccacctcacc gggcaaatgg 2500
 ggtcgggggg actggggcac cagaccaggc accacctgga cactttcttg 2550
 ttgaatcctc ccaacaccca gcacgtgtc atccccactc cttgtgtgca 2600
 cacatgcaga ggtgagaccc gcaggctccc aggaccagca gccacaaggg 2650
 cagggtgga gccgggtcct cagctgtctg ctcagcagcc ctggacccgc 2700
 gtgcgttacg tcaggccag atgcaggcg gcttttccaa ggccctcctga 2750
 tgggggcctc cgaaagggt ggagtcagcc ttggggagct gcctagcagc 2800
 ctctcctcgg gcaggagggg aggtggcttc ctccaaagga caccgatgg 2850
 cagggtgcta gggggtgtgg ggttcggtc tcccttcccc tccactgaa 2900
 gtttgtgctt aaaaaacaat aaatttgact tggcaccact gggggttggg 2950
 gggagaggcc gtgtgacctg gctctctgtc ccagtgccac caggtcatcc 3000
 acatgcgcag 3010

<210> 314
 <211> 461
 <212> PRT
 <213> Homo sapiens

<400> 314
 Met Val Asn Asp Arg Trp Lys Thr Met Gly Gly Ala Ala Gln Leu
 1 5 10 15
 Glu Asp Arg Pro Arg Asp Lys Pro Gln Arg Pro Ser Cys Gly Tyr
 20 25 30
 Val Leu Cys Thr Val Leu Leu Ala Leu Ala Val Leu Leu Ala Val
 35 40 45
 Ala Val Thr Gly Ala Val Leu Phe Leu Asn His Ala His Ala Pro
 50 55 60
 Gly Thr Ala Pro Pro Pro Val Val Ser Thr Gly Ala Ala Ser Ala
 65 70 75
 Asn Ser Ala Leu Val Thr Val Glu Arg Ala Asp Ser Ser His Leu
 80 85 90
 Ser Ile Leu Ile Asp Pro Arg Cys Pro Asp Leu Thr Asp Ser Phe
 95 100 105

Ala	Arg	Leu	Glu	Ser	Ala	Gln	Ala	Ser	Val	Leu	Gln	Ala	Leu	Thr
				110					115					120
Glu	His	Gln	Ala	Gln	Pro	Arg	Leu	Val	Gly	Asp	Gln	Glu	Gln	Glu
				125					130					135
Leu	Leu	Asp	Thr	Leu	Ala	Asp	Gln	Leu	Pro	Arg	Leu	Leu	Ala	Arg
				140					145					150
Ala	Ser	Glu	Leu	Gln	Thr	Glu	Cys	Met	Gly	Leu	Arg	Lys	Gly	His
				155					160					165
Gly	Thr	Leu	Gly	Gln	Gly	Leu	Ser	Ala	Leu	Gln	Ser	Glu	Gln	Gly
				170					175					180
Arg	Leu	Ile	Gln	Leu	Leu	Ser	Glu	Ser	Gln	Gly	His	Met	Ala	His
				185					190					195
Leu	Val	Asn	Ser	Val	Ser	Asp	Ile	Leu	Asp	Ala	Leu	Gln	Arg	Asp
				200					205					210
Arg	Gly	Leu	Gly	Arg	Pro	Arg	Asn	Lys	Ala	Asp	Leu	Gln	Arg	Ala
				215					220					225
Pro	Ala	Arg	Gly	Thr	Arg	Pro	Arg	Gly	Cys	Ala	Thr	Gly	Ser	Arg
				230					235					240
Pro	Arg	Asp	Cys	Leu	Asp	Val	Leu	Leu	Ser	Gly	Gln	Gln	Asp	Asp
				245					250					255
Gly	Val	Tyr	Ser	Val	Phe	Pro	Thr	His	Tyr	Pro	Ala	Gly	Phe	Gln
				260					265					270
Val	Tyr	Cys	Asp	Met	Arg	Thr	Asp	Gly	Gly	Gly	Trp	Thr	Val	Phe
				275					280					285
Gln	Arg	Arg	Glu	Asp	Gly	Ser	Val	Asn	Phe	Phe	Arg	Gly	Trp	Asp
				290					295					300
Ala	Tyr	Arg	Asp	Gly	Phe	Gly	Arg	Leu	Thr	Gly	Glu	His	Trp	Leu
				305					310					315
Gly	Leu	Lys	Arg	Ile	His	Ala	Leu	Thr	Thr	Gln	Ala	Ala	Tyr	Glu
				320					325					330
Leu	His	Val	Asp	Leu	Glu	Asp	Phe	Glu	Asn	Gly	Thr	Ala	Tyr	Ala
				335					340					345
Arg	Tyr	Gly	Ser	Phe	Gly	Val	Gly	Leu	Phe	Ser	Val	Asp	Pro	Glu
				350					355					360
Glu	Asp	Gly	Tyr	Pro	Leu	Thr	Val	Ala	Asp	Tyr	Ser	Gly	Thr	Ala
				365					370					375
Gly	Asp	Ser	Leu	Leu	Lys	His	Ser	Gly	Met	Arg	Phe	Thr	Thr	Lys
				380					385					390
Asp	Arg	Asp	Ser	Asp	His	Ser	Glu	Asn	Asn	Cys	Ala	Ala	Phe	Tyr
				395					400					405
Arg	Gly	Ala	Trp	Trp	Tyr	Arg	Asn	Cys	His	Thr	Ser	Asn	Leu	Asn
				410					415					420

Gly Gln Tyr Leu Arg Gly Ala His Ala Ser Tyr Ala Asp Gly Val
425 430 435

Glu Trp Ser Ser Trp Thr Gly Trp Gln Tyr Ser Leu Lys Phe Ser
440 445 450

Glu Met Lys Ile Arg Pro Val Arg Glu Asp Arg
455 460

<210> 315
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 315
cacacgtcca acctcaatgg gcag 24

<210> 316
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 316
gaccagcagg gcccaaggaca agg 23

<210> 317
<211> 44
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 317
gttctctgag atgaagatcc ggccggtccg ggagtaccgc ttag 44

<210> 318
<211> 1841
<212> DNA
<213> Homo sapiens

<400> 318
gcagtcagag acttcccctg cccctcgctg ggaaagaaca ttaggaatgc 50
cttttagtgc cttgcttcct gaactagctc acagtagccc ggcggcccag 100
ggcaatccga ccacatttca ctctcaccgc ttaggaatc cagatgcagg 150
ccaagtacag cagcacgagg gacatgctgg atgatgatgg ggacaccacc 200
atgagcctgc attctcaagc ctctgccaca actcggcatc cagagccccg 250
gcgcacagag cacagggctc cctcttcaac gtggcgacca gtggccctga 300
ccctgctgac tttgtgcttg gtgctgctga tagggctggc agccctgggg 350
cttttgtttt ttcagtacta ccagctctcc aatactggtc aagacacccat 400

<400> 319

Met	Gln	Ala	Lys	Tyr	Ser	Ser	Thr	Arg	Asp	Met	Leu	Asp	Asp	Asp	1	5	10	15
Gly	Asp	Thr	Thr	Met	Ser	Leu	His	Ser	Gln	Ala	Ser	Ala	Thr	Thr	20	25	30	
Arg	His	Pro	Glu	Pro	Arg	Arg	Thr	Glu	His	Arg	Ala	Pro	Ser	Ser	35	40	45	
Thr	Trp	Arg	Pro	Val	Ala	Leu	Thr	Leu	Leu	Thr	Leu	Cys	Leu	Val	50	55	60	
Leu	Leu	Ile	Gly	Leu	Ala	Ala	Leu	Gly	Leu	Leu	Phe	Phe	Gln	Tyr	65	70	75	
Tyr	Gln	Leu	Ser	Asn	Thr	Gly	Gln	Asp	Thr	Ile	Ser	Gln	Met	Glu	80	85	90	
Glu	Arg	Leu	Gly	Asn	Thr	Ser	Gln	Glu	Leu	Gln	Ser	Leu	Gln	Val	95	100	105	
Gln	Asn	Ile	Lys	Leu	Ala	Gly	Ser	Leu	Gln	His	Val	Ala	Glu	Lys	110	115	120	
Leu	Cys	Arg	Glu	Leu	Tyr	Asn	Lys	Ala	Gly	Ala	His	Arg	Cys	Ser	125	130	135	
Pro	Cys	Thr	Glu	Gln	Trp	Lys	Trp	His	Gly	Asp	Asn	Cys	Tyr	Gln	140	145	150	
Phe	Tyr	Lys	Asp	Ser	Lys	Ser	Trp	Glu	Asp	Cys	Lys	Tyr	Phe	Cys	155	160	165	
Leu	Ser	Glu	Asn	Ser	Thr	Met	Leu	Lys	Ile	Asn	Lys	Gln	Glu	Asp	170	175	180	
Leu	Glu	Phe	Ala	Ala	Ser	Gln	Ser	Tyr	Ser	Glu	Phe	Phe	Tyr	Ser	185	190	195	
Tyr	Trp	Thr	Gly	Leu	Leu	Arg	Pro	Asp	Ser	Gly	Lys	Ala	Trp	Leu	200	205	210	
Trp	Met	Asp	Gly	Thr	Pro	Phe	Thr	Ser	Glu	Leu	Phe	His	Ile	Ile	215	220	225	
Ile	Asp	Val	Thr	Ser	Pro	Arg	Ser	Arg	Asp	Cys	Val	Ala	Ile	Leu	230	235	240	
Asn	Gly	Met	Ile	Phe	Ser	Lys	Asp	Cys	Lys	Glu	Leu	Lys	Arg	Cys	245	250	255	
Val	Cys	Glu	Arg	Arg	Ala	Gly	Met	Val	Lys	Pro	Glu	Ser	Leu	His	260	265	270	
Val	Pro	Pro	Glu	Thr	Leu	Gly	Glu	Gly	Asp	275	280							

<210> 320

<211> 468

<212> DNA

<213> Homo sapiens

<220>
 <221> unsure
 <222> 59, 95, 149, 331, 364, 438, 446
 <223> unknown base

 <400> 320
 aattttcacc gctgtaggaa tccagatgca ggccaagtac agcagcacga 50
 gggacatgnt ggatgatgat gggacaccac catgagcctg cattntcaag 100
 cttttgccac aattcggcat ccagagcccc ggcgcacaga gcacagggnt 150
 cctttttcaa cgtggcgacc agtggccctg accctgctga ctttgtgctt 200
 ggtgctgctg atagggctgg cagccctggg gcttttgttt tttcagtact 250
 accagctctc caatactggt caagacacca tttctcaaat ggaagaaaga 300
 ttaggaaata cgtcccaaga gttgcaattt nttcaagtcc agaataataa 350
 gcttgcagga agntngcagc atgtggctga aaaactctgt cgtgagctgt 400
 ataacaagc tggaggaact ttgaaggagg gcaaagtntc ctcatntact 450
 atacacacac cacttccc 468

 <210> 321
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 321
 atgcaggcca agtacagcag cac 23

 <210> 322
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 322
 catgctgacg acttcctgca agc 23

 <210> 323
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 323
 ccacacagtc tctgcttctt ggg 23

 <210> 324
 <211> 40
 <212> DNA
 <213> Artificial Sequence

gatccagaat accagccatc tggccgttga tggggaccgg gcagctgctt 1350
 ggcccgtggg tattccagca ccatcccgcc cggcctcccg ctttgagggtg 1400
 ctgcgctggg actacttcac ggagcagcac gctttctcct gcgcgatgg 1450
 ctcaccccgc tgcccactgc gtggggctga ccgggctgat gtggccgatg 1500
 ttctggggac agctctagag gagctgaacc gccgctacca cccggccttg 1550
 cggctccaga agcagcagct ggtgaatggc taccgacgct ttgatccggc 1600
 ccgggggtatg gaatacacgc tggacttgca gctggaggca ctgaccccc 1650
 agggaggccg ccggcccctc actcgccgag tgcagctgct ccggccgctg 1700
 agccgcgtgg agatcttgcc tgtgccctat gtcactgagg cctcacgtct 1750
 cactgtgctg ctgcctctag ctgcggctga gcgtgacctg gcccttggt 1800
 tcttgagggc ctttgccact gcagcactgg agcctggtga tgctgcggca 1850
 gccctgacct tgctgctact gtatgagccg cgccaggccc agcgcgtggc 1900
 ccatgcagat gtcttcgcac ctgtcaaggc ccacgtggca gagctggagc 1950
 ggcgtttccc cggtgcccgg gtgccatggc tcagtgtgca gacagccgca 2000
 ccctcaccac tgcgccctcat ggatctactc tccaagaagc acccgctgga 2050
 cacactgttc ctgctggccg ggccagacac ggtgctcacg cctgacttcc 2100
 tgaaccgctg ccgcatgcat gccatctccg gctggcaggc cttctttccc 2150
 atgcatttcc aagccttcca ccaggtgtg gcccaccac aagggcctgg 2200
 gccccagag ctggggcctg aactggccg ctttgatgc caggcagcca 2250
 gcgaggcctg cttctacaac tccgactacg tggcagcccg tgggcgcctg 2300
 gcggcagcct cagaacaaga agaggagctg ctggagagcc tggatgtgta 2350
 cgagctgttc ctocattct ccagtctgca tgtgctgcgg gcggtggagc 2400
 cggcgtgct gcagcgctac cgggcccaga cgtgcagcg gaggctcagt 2450
 gaggacctgt accacgctg cctccagagc gtgcttgagg gcctcggctc 2500
 ccgaacccag ctggccatgc tactctttga acaggagcag ggcaacagca 2550
 cctgaccca ccctgtcccc gtgggcccgtg gcatggccac accccacccc 2600
 acttctcccc caaaaccaga gccacctgcc agcctcgctg ggcagggctg 2650
 gccgtagcca gaccccaagc tggcccactg gtcccctctc tggctctgtg 2700
 ggtccctggg ctctggacaa gcaactggggg acgtgcccc agagccacc 2750
 acttctcatc ccaaaccag tttccctgcc cctgacgct gctgattcgg 2800
 gctgtggcct ccacgtatct atgcagtaca gtctgcctga cgccagccct 2850
 gcctctgggc cctgggggct gggctgtaga agagtgttg gggaaggagg 2900

Val	Ser	Ala	Arg	Pro	Asp	Glu	Trp	Leu	Gly	Arg	Cys	Ile	Leu	Asp	
				275					280					285	
Ala	Thr	Gly	Val	Gly	Cys	Thr	Gly	Asp	His	Glu	Gly	Val	His	Tyr	
				290					295					300	
Ser	His	Leu	Glu	Leu	Ser	Pro	Gly	Glu	Pro	Val	Gln	Glu	Gly	Asp	
				305					310					315	
Pro	His	Phe	Arg	Ser	Ala	Leu	Thr	Ala	His	Pro	Val	Arg	Asp	Pro	
				320					325					330	
Val	His	Met	Tyr	Gln	Leu	His	Lys	Ala	Phe	Ala	Arg	Ala	Glu	Leu	
				335					340					345	
Glu	Arg	Thr	Tyr	Gln	Glu	Ile	Gln	Glu	Leu	Gln	Trp	Glu	Ile	Gln	
				350					355					360	
Asn	Thr	Ser	His	Leu	Ala	Val	Asp	Gly	Asp	Arg	Ala	Ala	Ala	Trp	
				365					370					375	
Pro	Val	Gly	Ile	Pro	Ala	Pro	Ser	Arg	Pro	Ala	Ser	Arg	Phe	Glu	
				380					385					390	
Val	Leu	Arg	Trp	Asp	Tyr	Phe	Thr	Glu	Gln	His	Ala	Phe	Ser	Cys	
				395					400					405	
Ala	Asp	Gly	Ser	Pro	Arg	Cys	Pro	Leu	Arg	Gly	Ala	Asp	Arg	Ala	
				410					415					420	
Asp	Val	Ala	Asp	Val	Leu	Gly	Thr	Ala	Leu	Glu	Glu	Leu	Asn	Arg	
				425					430					435	
Arg	Tyr	His	Pro	Ala	Leu	Arg	Leu	Gln	Lys	Gln	Gln	Leu	Val	Asn	
				440					445					450	
Gly	Tyr	Arg	Arg	Phe	Asp	Pro	Ala	Arg	Gly	Met	Glu	Tyr	Thr	Leu	
				455					460					465	
Asp	Leu	Gln	Leu	Glu	Ala	Leu	Thr	Pro	Gln	Gly	Gly	Arg	Arg	Pro	
				470					475					480	
Leu	Thr	Arg	Arg	Val	Gln	Leu	Leu	Arg	Pro	Leu	Ser	Arg	Val	Glu	
				485					490					495	
Ile	Leu	Pro	Val	Pro	Tyr	Val	Thr	Glu	Ala	Ser	Arg	Leu	Thr	Val	
				500					505					510	
Leu	Leu	Pro	Leu	Ala	Ala	Ala	Glu	Arg	Asp	Leu	Ala	Pro	Gly	Phe	
				515					520					525	
Leu	Glu	Ala	Phe	Ala	Thr	Ala	Ala	Leu	Glu	Pro	Gly	Asp	Ala	Ala	
				530					535					540	
Ala	Ala	Leu	Thr	Leu	Leu	Leu	Leu	Tyr	Glu	Pro	Arg	Gln	Ala	Gln	
				545					550					555	
Arg	Val	Ala	His	Ala	Asp	Val	Phe	Ala	Pro	Val	Lys	Ala	His	Val	
				560					565					570	
Ala	Glu	Leu	Glu	Arg	Arg	Phe	Pro	Gly	Ala	Arg	Val	Pro	Trp	Leu	
				575					580					585	

Ser Val Gln Thr	Ala Ala Pro Ser Pro	Leu Arg Leu Met Asp	Leu
	590	595	600
Leu Ser Lys Lys	His Pro Leu Asp Thr	Leu Phe Leu Leu Ala	Gly
	605	610	615
Pro Asp Thr Val	Leu Thr Pro Asp Phe	Leu Asn Arg Cys Arg	Met
	620	625	630
His Ala Ile Ser	Gly Trp Gln Ala Phe	Phe Pro Met His Phe	Gln
	635	640	645
Ala Phe His Pro	Gly Val Ala Pro Pro	Gln Gly Pro Gly Pro	Pro
	650	655	660
Glu Leu Gly Arg	Asp Thr Gly Arg Phe	Asp Arg Gln Ala Ala	Ser
	665	670	675
Glu Ala Cys Phe	Tyr Asn Ser Asp Tyr	Val Ala Ala Arg Gly	Arg
	680	685	690
Leu Ala Ala Ala	Ser Glu Gln Glu Glu	Glu Leu Leu Glu Ser	Leu
	695	700	705
Asp Val Tyr Glu	Leu Phe Leu His Phe	Ser Ser Leu His Val	Leu
	710	715	720
Arg Ala Val Glu	Pro Ala Leu Leu Gln	Arg Tyr Arg Ala Gln	Thr
	725	730	735
Cys Ser Ala Arg	Leu Ser Glu Asp Leu	Tyr His Arg Cys Leu	Gln
	740	745	750
Ser Val Leu Glu	Gly Leu Gly Ser Arg	Thr Gln Leu Ala Met	Leu
	755	760	765
Leu Phe Glu Gln	Glu Gln Gly Asn Ser	Thr	
	770	775	

<210> 327
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 327
 tggaaggctg ccgcaacgac aatc 24

<210> 328
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 328
 ctgatgtggc cgatgttctg 20

<210> 329
 <211> 20

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 329
atggctcagt gtgcagacag 20

<210> 330
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 330
gcatgctgct ccgtgaagta gtcc 24

<210> 331
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 331
atgcatggga aagaaggcct gccc 24

<210> 332
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 332
tgcactggtg accacgaggg ggtgcactat agccatctgg agctgag 47

<210> 333
<211> 1095
<212> DNA
<213> Homo sapiens

<400> 333
gctctggccg gccccggcga ttggtcaccg cccgctaggg gacagccctg 50
gcctcctctg attggcaagc gctggccacc tccccacacc ccttgccaac 100
gctcccctag tggagaaaag gagtagctat tagccaattc ggcagggccc 150
gctttttaga agcttgattt cctttgaaga tgaaagacta gcggaagctc 200
tgcccttttc ccagtgggc gaggggaactc ggggcgattg gctgggaact 250
gtatocaccc aaatgtcacc gatttcttcc tatgcaggaa atgagcagac 300
ccatcaataa gaaatttctc agcctggccg aaaatggttg gccccacgaa 350
gccacgacaa ctggaggcaa agagggttgc tcaacgcccc gcctcattgg 400

aaaaccaa at cagatctggg acctatatag cgtggcggag gcggggcgat 450
gattgtcgcg ctgcaccca ctgcagctgc gcacagtcgc atttctttcc 500
ccgcccctga gaccctgcag caccatctgt catggcgggt gggctgtttg 550
gtttgagcgc tcgccgtctt ttggcggcag cggcgacgcg agggctcccg 600
gccgcccgcg tccgctggga atctagcttc tccaggactg tggctgcccc 650
gtccgctgtg gcgggaaagc ggccccaga accgaccaca ccgtggcaag 700
aggacccaga acccgaggac gaaaacttgt atgagaagaa cccagactcc 750
catggttatg acaaggaccc cgttttggac gtctggaaca tgcgacttgt 800
cttcttcttt ggcgtctcca tcctcctggt ccttggcagc acctttgtgg 850
cctatctgcc tgactacagg atgaaagagt ggtcccgcgc cgaagctgag 900
aggcttgtga aataccgaga ggccaatggc ctccccatca tggaatccaa 950
ctgcttcgac cccagcaaga tccagctgcc agaggatgag tgaccagttg 1000
ctaagtgggg ctcaagaagc accgccttcc ccaccccctg cctgccattc 1050
tgacctcttc tcagagcacc taattaaagg ggctgaaagt ctgaa 1095

<210> 334
<211> 153
<212> PRT
<213> Homo sapiens

<400> 334
Met Ala Ala Gly Leu Phe Gly Leu Ser Ala Arg Arg Leu Leu Ala
1 5 10 15
Ala Ala Ala Thr Arg Gly Leu Pro Ala Ala Arg Val Arg Trp Glu
20 25 30
Ser Ser Phe Ser Arg Thr Val Val Ala Pro Ser Ala Val Ala Gly
35 40 45
Lys Arg Pro Pro Glu Pro Thr Thr Pro Trp Gln Glu Asp Pro Glu
50 55 60
Pro Glu Asp Glu Asn Leu Tyr Glu Lys Asn Pro Asp Ser His Gly
65 70 75
Tyr Asp Lys Asp Pro Val Leu Asp Val Trp Asn Met Arg Leu Val
80 85 90
Phe Phe Phe Gly Val Ser Ile Ile Leu Val Leu Gly Ser Thr Phe
95 100 105
Val Ala Tyr Leu Pro Asp Tyr Arg Met Lys Glu Trp Ser Arg Arg
110 115 120
Glu Ala Glu Arg Leu Val Lys Tyr Arg Glu Ala Asn Gly Leu Pro
125 130 135
Ile Met Glu Ser Asn Cys Phe Asp Pro Ser Lys Ile Gln Leu Pro
140 145 150

Glu Asp Glu

<210> 335
<211> 442
<212> DNA
<213> Homo sapiens

<400> 335
ggcggctggg ctgtttggtt tgagcgctcg ccgtcttttg gcggcagcgg 50
cgacgcgagg gctcccggcc gcccgcgctcc gctgggaatc tagcttctcc 100
aggactgtgg tcgccccgtc cgctgtggcg ggaaagcggc cccagaacc 150
gaccacaccg tggcaagagg acccagaacc cgaggacgaa aacttgatg 200
agaagaaccc agactcccat ggttatgaca aggaccccggt tttggacgtc 250
tggaacatgc gaattgtctt cttctttggc gtctccatca tcctggtcct 300
tggcagcacc tttgtggcct atctgcctga ctacaggatg aaagagtgg 350
ccgcgcgca agctgagagg cttgtgaaat accgagaggc caatggcctt 400
cccatcatgg aatccaactg cttcgacccc agcaagatcc ag 442

<210> 336
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 336
ctgagaccct gcagaccat ctg 23

<210> 337
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 337
ggtgcttctt gagccccact tagc 24

<210> 338
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 338
aatctagctt ctccaggact gtggtcgccc cgtccgctgt 40

<210> 339
<211> 2162
<212> DNA

<213> Homo sapiens

<400> 339

gcggcggtcta tgccgcttgc tctgctcgtc ctgttgctcc tggggcccg 50
 cggctggtgc cttgcagaac cccacgcga cagcctgcgg gaggaacttg 100
 tcatcaccac gctgccttcc ggggacgtag ccgccacatt ccagttccgc 150
 acgcgctggg attcggagct tcagcgggaa ggagtgtccc attacaggct 200
 ctttcccaaa gccctggggc agctgatctc caagtattct ctacgggagc 250
 tgcacctgtc attcacacaa ggcttttgga ggacccgata ctgggggcca 300
 cccttcctgc agggcccatc aggtgcagag ctgtgggtct ggttccaaga 350
 cactgtcact gatgtggata aatcttgga ggagctcagt aatgtcctct 400
 cagggatctt ctgcgcctct ctcaacttca tcgactccac caacacagtc 450
 actcccactg cctccttcaa acccctgggt ctggccaatg acactgacca 500
 ctactttctg cgctatgctg tgctgcgcgc ggaggtggtc tgcaccgaaa 550
 acctcaccac ctggaagaag ctcttgccct gtagttccaa ggcaggcctc 600
 tctgtgctgc tgaaggcaga tcgcttgctc cacaccagct accactccca 650
 ggagtgcat atccgccctg tttgcagaaa tgcacgctgt actagcatct 700
 cctgggagct gaggcagacc ctgtcagttg tatttgatgc cttcatcacg 750
 gggcagggaa agaaagactg gtccctcttc cggatgttct cccgaaccct 800
 cacggagccc tgccccctgg cttcagagag ccgagtctat gtggacatca 850
 ccacctacaa ccaggacaac gagacattag aggtgcaccc acccccgacc 900
 actacatatc aggacgtcat cctaggcact cggaagacct atgccatcta 950
 tgacttgctt gacaccgcca tgatcaacaa ctctcgaaac ctcaacatcc 1000
 agtcaagtg gaagagaccc ccagagaatg agggccccc agtgcccttc 1050
 ctgcatgcc agcggtagct gagtggctat gggctgcaga agggggagct 1100
 gagcactg ctgtacaaca cccaccata cggggccttc ccggtgctgc 1150
 tgctggacac cgtaccctgg tatctgcggc tgtatgtgca caccctcacc 1200
 atcacctcca agggcaagga gaacaaacca agttacatcc actaccagcc 1250
 tgcccaggac cggctgcaac cccacctcct ggagatgctg attcagctgc 1300
 cggccaactc agtcaccaag gtttccatcc agtttgagcg ggcgctgctg 1350
 aagtggaccg agtacagcc agatcctaac catggcttct atgtcagccc 1400
 atctgtcctc agcgcccttg tgcccagcat ggtagcagcc aagccagtgg 1450
 actgggaaga gagtcccctc ttcaacagcc tgttcccagt ctctgatggc 1500

Val	Leu	Ser	Ala	Leu	Val	Pro	Ser	Met	Val	Ala	Ala	Lys	Pro	Val	
				470					475					480	
Asp	Trp	Glu	Glu	Ser	Pro	Leu	Phe	Asn	Ser	Leu	Phe	Pro	Val	Ser	
				485					490					495	
Asp	Gly	Ser	Asn	Tyr	Phe	Val	Arg	Leu	Tyr	Thr	Glu	Pro	Leu	Leu	
				500					505					510	
Val	Asn	Leu	Pro	Thr	Pro	Asp	Phe	Ser	Met	Pro	Tyr	Asn	Val	Ile	
				515					520					525	
Cys	Leu	Thr	Cys	Thr	Val	Val	Ala	Val	Cys	Tyr	Gly	Ser	Phe	Tyr	
				530					535					540	
Asn	Leu	Leu	Thr	Arg	Thr	Phe	His	Ile	Glu	Glu	Pro	Arg	Thr	Gly	
				545					550					555	
Gly	Leu	Ala	Lys	Arg	Leu	Ala	Asn	Leu	Ile	Arg	Arg	Ala	Arg	Gly	
				560					565					570	

Val Pro Pro Leu

<210> 341
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 341
 tggacaccgt accctggtat ctgc 24

<210> 342
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> Artificial Sequence
 <222> 1-24
 <223> Synthetic oligonucleotide probe

<400> 342
 ccaactctga ggagagcaag tggc 24

<210> 343
 <211> 44
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 343
 tgtatgtgca caccctcacc atcacctcca agggcaagga gaac 44

<210> 344
 <211> 762
 <212> DNA
 <213> Homo sapiens

<210> 346
 <211> 2528
 <212> DNA
 <213> Homo sapiens

<400> 346
 aaactcagca cttgccggag tggctcattg ttaagacaaa ggggtgtgcac 50
 ttctctggcca ggaaacctga gcggtgagac tcccagctgc ctacatcaag 100
 gccccaggac atgcagaacc ttctctctaga acccgacca ccaccatgag 150
 gtcctgcctg tggagatgca ggcacctgag ccaaggcgtc cagtggctcct 200
 tgcttctggc tgtctctggc ttctttctct tgccttgcc ctcttttatt 250
 aaggagcctc aaacaaagcc ttccaggcat caacgcacag agaacattaa 300
 agaaagggtct ctacagtccc tggcaaagcc taagtcccag gcaccacaa 350
 gggcgaggag gacaaccatc tatgcagagc cagcgccaga gaacaatgcc 400
 ctcaacacac aaaccagcc caaggccac accaccggag acagaggaaa 450
 ggaggccaac caggcaccgc cggaggagca ggacaagggtg cccacacag 500
 cacagagggc agcatggaag agcccagaaa aagagaaaac catggtgaac 550
 aactgtcac ccagagggca agatgcaggg atggcctctg gcaggacaga 600
 ggcaaatca tggaaagagcc aggacacaaa gacgaccaa ggaaatgggg 650
 gccagaccag gaagctgacg gcctccagga cgggtgtcaga gaagcaccag 700
 ggcaaagcgg caaccacagc caagacgctc attcccaaaa gtcagcacag 750
 aatgtgggt cccacaggag cagtgtcaac aaggacgaga cagaaaggag 800
 tgaccacagc agtcatcca cctaaggaga agaaacctca ggccaccca 850
 cccctgccc ctttccagag cccacgacg cagagaaacc aaagactgaa 900
 ggccgccaac ttcaaatctg agcctcgggtg ggattttgag gaaaaatata 950
 gcttcgaaat aggaggcctt cagacgactt gccctgactc tgtgaagatc 1000
 aaagcctcca agtcgctgtg gctccagaaa ctctttctgc ccaacctcac 1050
 tctcttctg gactccagac acttcaacca gagtgagtgg gaccgcctgg 1100
 aacactttgc accacccttt ggcttcatgg agctcaacta ctcttggtg 1150
 cagaaggctg tgacacgctt ccctccagtg cccagcagc agctgctcct 1200
 ggccagcctc cccgctggga gcctccggtg catcacctgt gccgtggtgg 1250
 gcaacggggg catcctgaac aactcccaca tgggccagga gatagacagt 1300
 cagactacg tggtccgatt gagcggagct ctcatataag gctacgaaca 1350
 ggatgtgggg actcggacat cttctacgg ctttaccgcc ttctccctga 1400
 cccagtcact ccttatattg ggcaatcggg gtttcaagaa cgtgcctctt 1450

gggaaggacg tccgctactt gcacttctctg gaaggcaccc gggactatga 1500
 gtggctggaa gcactgctta tgaatcagac ggtgatgtca aaaaaccttt 1550
 tctggttcag gcacagaccc caggaagctt ttcgggaagc cctgcacatg 1600
 gacaggtacc tgttctgtgca cccagacttt ctccgataca tgaagaacag 1650
 gtttctgagg tctaagaccc tggatgggtgc cactggagg atataccgcc 1700
 ccaccactgg ggccctctctg ctgtctactg cccttcagct ctgtgaccag 1750
 gtgagtgtct atggcttcat cactgagggc catgagcgct tttctgatca 1800
 ctactatgat acatcatgga agcggctgat cttttacata aaccatgact 1850
 tcaagctgga gagagaagtc tggaagcggc tacacgatga agggataatc 1900
 cggctgtacc agcgtcctgg tcccgggaact gccaaagcca agaactgacc 1950
 ggggccaggg ctgccatggt ctcccttgct gctccaaggc acaggataca 2000
 gtgggaatct tgagactctt tggccatttc ccatgggtca gactaagctc 2050
 caagcccttc aggagtcca agggaaact tgaacctgga acaagactct 2100
 ctcaagatgg caaatggcta attgaggttc tgaagttctt cagtacattg 2150
 ctgtaggtcc tgaggccagg gatttttaat taaatggggt gatgggtggc 2200
 caataccaca attcctgctg aaaaacactc ttccagtoca aaagcttctt 2250
 gatacagaaa aaagagcctg gatttacaga aacatataga tctggtttga 2300
 attccagatc gagtttacag ttgtgaaatc ttgaaggat tactttaactt 2350
 cactacagat tgtctagaag acctttctag gagttatctg attctagaag 2400
 ggtctatact tgtccttgct ttttaagctat ttgacaactc tacgtgttgt 2450
 agaaaactga taataatata aatgattgtt gtccatggaa agggcaataa 2500
 attttctaca gtgaaaaaaaa aaaaaaaaa 2528

<210> 347
 <211> 600
 <212> PRT
 <213> Homo sapiens

<400> 347
 Met Arg Ser Cys Leu Trp Arg Cys Arg His Leu Ser Gln Gly Val
 1 5 10 15
 Gln Trp Ser Leu Leu Leu Ala Val Leu Val Phe Phe Leu Phe Ala
 20 25 30
 Leu Pro Ser Phe Ile Lys Glu Pro Gln Thr Lys Pro Ser Arg His
 35 40 45
 Gln Arg Thr Glu Asn Ile Lys Glu Arg Ser Leu Gln Ser Leu Ala
 50 55 60
 Lys Pro Lys Ser Gln Ala Pro Thr Arg Ala Arg Arg Thr Thr Ile

	65	70	75
Tyr Ala Glu Pro	Ala Pro Glu Asn Asn	Ala Leu Asn Thr Gln Thr	
	80	85	90
Gln Pro Lys Ala	His Thr Thr Gly Asp	Arg Gly Lys Glu Ala Asn	
	95	100	105
Gln Ala Pro Pro	Glu Glu Gln Asp Lys	Val Pro His Thr Ala Gln	
	110	115	120
Arg Ala Ala Trp	Lys Ser Pro Glu Lys	Glu Lys Thr Met Val Asn	
	125	130	135
Thr Leu Ser Pro	Arg Gly Gln Asp Ala	Gly Met Ala Ser Gly Arg	
	140	145	150
Thr Glu Ala Gln	Ser Trp Lys Ser Gln	Asp Thr Lys Thr Thr Gln	
	155	160	165
Gly Asn Gly Gly	Gln Thr Arg Lys Leu	Thr Ala Ser Arg Thr Val	
	170	175	180
Ser Glu Lys His	Gln Gly Lys Ala Ala	Thr Thr Ala Lys Thr Leu	
	185	190	195
Ile Pro Lys Ser	Gln His Arg Met Leu	Ala Pro Thr Gly Ala Val	
	200	205	210
Ser Thr Arg Thr	Arg Gln Lys Gly Val	Thr Thr Ala Val Ile Pro	
	215	220	225
Pro Lys Glu Lys	Lys Pro Gln Ala Thr	Pro Pro Pro Ala Pro Phe	
	230	235	240
Gln Ser Pro Thr	Thr Gln Arg Asn Gln	Arg Leu Lys Ala Ala Asn	
	245	250	255
Phe Lys Ser Glu	Pro Arg Trp Asp Phe	Glu Glu Lys Tyr Ser Phe	
	260	265	270
Glu Ile Gly Gly	Leu Gln Thr Thr Cys	Pro Asp Ser Val Lys Ile	
	275	280	285
Lys Ala Ser Lys	Ser Leu Trp Leu Gln	Lys Leu Phe Leu Pro Asn	
	290	295	300
Leu Thr Leu Phe	Leu Asp Ser Arg His	Phe Asn Gln Ser Glu Trp	
	305	310	315
Asp Arg Leu Glu	His Phe Ala Pro Pro	Phe Gly Phe Met Glu Leu	
	320	325	330
Asn Tyr Ser Leu	Val Gln Lys Val Val	Thr Arg Phe Pro Pro Val	
	335	340	345
Pro Gln Gln Gln	Leu Leu Leu Ala Ser	Leu Pro Ala Gly Ser Leu	
	350	355	360
Arg Cys Ile Thr	Cys Ala Val Val Gly	Asn Gly Gly Ile Leu Asn	
	365	370	375
Asn Ser His Met	Gly Gln Glu Ile Asp	Ser His Asp Tyr Val Phe	

	380		385		390
Arg Leu Ser Gly	Ala Leu Ile Lys Gly	Tyr Glu Gln Asp Val	Gly		
	395	400	405		
Thr Arg Thr Ser	Phe Tyr Gly Phe Thr	Ala Phe Ser Leu Thr	Gln		
	410	415	420		
Ser Leu Leu Ile	Leu Gly Asn Arg Gly	Phe Lys Asn Val Pro	Leu		
	425	430	435		
Gly Lys Asp Val	Arg Tyr Leu His Phe	Leu Glu Gly Thr Arg	Asp		
	440	445	450		
Tyr Glu Trp Leu	Glu Ala Leu Leu Met	Asn Gln Thr Val Met	Ser		
	455	460	465		
Lys Asn Leu Phe	Trp Phe Arg His Arg	Pro Gln Glu Ala Phe	Arg		
	470	475	480		
Glu Ala Leu His	Met Asp Arg Tyr Leu	Leu Leu His Pro Asp	Phe		
	485	490	495		
Leu Arg Tyr Met	Lys Asn Arg Phe Leu	Arg Ser Lys Thr Leu	Asp		
	500	505	510		
Gly Ala His Trp	Arg Ile Tyr Arg Pro	Thr Thr Gly Ala Leu	Leu		
	515	520	525		
Leu Leu Thr Ala	Leu Gln Leu Cys Asp	Gln Val Ser Ala Tyr	Gly		
	530	535	540		
Phe Ile Thr Glu	Gly His Glu Arg Phe	Ser Asp His Tyr Tyr	Asp		
	545	550	555		
Thr Ser Trp Lys	Arg Leu Ile Phe Tyr	Ile Asn His Asp Phe	Lys		
	560	565	570		
Leu Glu Arg Glu	Val Trp Lys Arg Leu	His Asp Glu Gly Ile	Ile		
	575	580	585		
Arg Leu Tyr Gln	Arg Pro Gly Pro Gly	Thr Ala Lys Ala Lys	Asn		
	590	595	600		

<210> 348
 <211> 496
 <212> DNA
 <213> Homo sapiens

<400> 348
 cgatgcgcgg acccgggcac cccctcctcc tggggctgct gctggtgctg 50
 gggccttcgc cggagcagcg agtggaatt gttcctcgag atctgaggat 100
 gaaggacaag tttctaaaac accttacagg ccctctttat tttagtccaa 150
 agtgcagcaa acacttccat agactttatc acaacaccag agactgcacc 200
 attcctgcat actataaaag atgcgccagg cttcttacct ggctggctgt 250
 cagtccagtg tgcattggagg ataagtgagc agaccgtaca ggagcagcac 300
 accaggagcc atgagaagtg ccttggaac caacaggga acagaactat 350

ctttatacac atccccctcat ggacaagaga tttatttttg cagacagact 400
 cttccataag tcctttgagt tttgtatggt gttgacagtt tgcagatata 450
 tattcgataa atcagtgtac ttgacagtgt tatctgtcac ttattt 496

<210> 349
 <211> 91
 <212> PRT
 <213> Homo sapiens

<400> 349
 Met Arg Gly Pro Gly His Pro Leu Leu Leu Gly Leu Leu Leu Val
 1 5 10 15
 Leu Gly Pro Ser Pro Glu Gln Arg Val Glu Ile Val Pro Arg Asp
 20 25 30
 Leu Arg Met Lys Asp Lys Phe Leu Lys His Leu Thr Gly Pro Leu
 35 40 45
 Tyr Phe Ser Pro Lys Cys Ser Lys His Phe His Arg Leu Tyr His
 50 55 60
 Asn Thr Arg Asp Cys Thr Ile Pro Ala Tyr Tyr Lys Arg Cys Ala
 65 70 75
 Arg Leu Leu Thr Arg Leu Ala Val Ser Pro Val Cys Met Glu Asp
 80 85 90
 Lys

<210> 350
 <211> 1141
 <212> DNA
 <213> Homo sapiens

<400> 350
 gggctgggccc ccgcccgcagc tccagctggc cggtttgggc ctgcgggtccc 50
 ttctctggga ggcccgcacc cgcccgcgcc cagccccccac catgccacccc 100
 gcggggctcc gccggggcgc gccgctcacc gcaatcgctc tgttggtgct 150
 gggggctccc ctgggtgctgg ccggcgagga ctgcctgtgg tacctggacc 200
 ggaatggctc ctggcatccg gggtttaact gcgagttctt caccttctgc 250
 tgcgggacct gctaccatcg gtactgctgc agggacctga ccttgcttat 300
 caccgagagg cagcagaagc actgcctggc cttcagcccc aagaccatag 350
 caggcatcgc ctacagctgtg atcctctttg ttgctgtggt tgccaccacc 400
 atctgctgct tcctctgttc ctgttgctac ctgtaccgcc ggcgccagca 450
 gctccagagc ccatttgaag gccaggagat tccaatgaca ggcattccag 500
 tgcagccagt atacccatac cccaggacc ccaaagctgg ccctgcacccc 550
 ccacagcctg gcttcatgta cccacctagt ggtcctgctc cccaatatcc 600

Pro Ala Ala Pro Pro Pro Tyr Met Pro Pro Gln Pro Ser Tyr Pro
 185 190 195

Gly Ala

<210> 352
 <211> 3226
 <212> DNA
 <213> Homo sapiens

<400> 352
 gggggagcta ggccggcggc agtgggtggtg gcggcggcgc aagggtgagg 50
 gcggccccag aaccccaggt aggtagagca agaagatggt gtttctgccc 100
 ctcaaattggt cccttgcaac catgtcattt ctactttcct cactgttggc 150
 tctcttaact gtgtccactc cttcatggtg tcagagcact gaagcatctc 200
 caaaacgtag tgatgggaca ccatttcctt ggaataaaat acgacttcct 250
 gagtacgtca tcccagttca ttatgatctc ttgatccatg caaaccttac 300
 cacgctgacc ttctggggaa ccacgaaagt agaaatcaca gccagtcagc 350
 ccaccagcac catcatcctg catagtcacc acctgcagat atctagggcc 400
 accctcagga agggagctgg agagaggcta tcggaagaac ccctgcaggt 450
 cctggaacac cccctcagga agcaaattgc actgctggct cccgagcccc 500
 tccttgctcg gctcccgtag acagttgtca ttcactatgc tggcaatctt 550
 tcggagactt tccacggatt ttacaaaagc acctacagaa ccaaggaagg 600
 ggaactgagg atactagcat caacacaatt tgaaccact gcagctagaa 650
 tggcctttcc ctgctttgat gaacctgcct tcaaagcaag tttctcaatc 700
 aaaattagaa gagagccaag gcacctagcc atctccaata tgccattggt 750
 gaaatctgtg actgttgctg aaggactcat agaagacat tttgatgtca 800
 ctgtgaagat gagcacctat ctggtggcct tcatcatttc agattttgag 850
 tctgtcagca agataaccaa gagtggagtc aaggtttctg tttatgctgt 900
 gccagacaag ataaatcaag cagattatgc actggatgct gcggtgactc 950
 ttctagaatt ttatgaggat tatttcagca taccgtatcc cctacccaaa 1000
 caagatcttg ctgctattcc cgactttcag tctggtgcta tggaaaactg 1050
 gggactgaca acatatagag aatctgctct gttgtttgat gcagaaaagt 1100
 cttctgcac aagtaagctt ggcatcacag tgactgtggc ccatgaactg 1150
 gccaccagt ggtttgggaa cctggtcact atggaatggt ggaatgatct 1200
 ttggctaaat gaaggatttg ccaaatttat ggagtttgtg tctgtcagtg 1250
 tgacccatcc tgaactgaaa gttggagatt atttctttgg caaatgtttt 1300

aacgtatgta aaaattcctc ccttgcccg ttcctgttat ctctaatacac 2950
 caacattttg ttgagtgtat tttcaaacta gagatggctg ttttggctcc 3000
 aactggagat acttttttcc cttcaactca ttttttgact atccctgtga 3050
 aaagaatagc tgttagtttt tcatgaatgg gctttttcat gaatgggcta 3100
 tcgctaccat gtgttttggt catcacaggt gttgccctgc aacgtaaacc 3150
 caagtgttgg gttccctgcc acagaagaat aaagtacctt attcttctca 3200
 aaaaaaaaaa aaaaaaaaaa aaaaaa 3226

<210> 353
 <211> 941
 <212> PRT
 <213> Homo sapiens

<400> 353
 Met Val Phe Leu Pro Leu Lys Trp Ser Leu Ala Thr Met Ser Phe
 1 5 10 15
 Leu Leu Ser Ser Leu Leu Ala Leu Leu Thr Val Ser Thr Pro Ser
 20 25 30
 Trp Cys Gln Ser Thr Glu Ala Ser Pro Lys Arg Ser Asp Gly Thr
 35 40 45
 Pro Phe Pro Trp Asn Lys Ile Arg Leu Pro Glu Tyr Val Ile Pro
 50 55 60
 Val His Tyr Asp Leu Leu Ile His Ala Asn Leu Thr Thr Leu Thr
 65 70 75
 Phe Trp Gly Thr Thr Lys Val Glu Ile Thr Ala Ser Gln Pro Thr
 80 85 90
 Ser Thr Ile Ile Leu His Ser His His Leu Gln Ile Ser Arg Ala
 95 100 105
 Thr Leu Arg Lys Gly Ala Gly Glu Arg Leu Ser Glu Glu Pro Leu
 110 115 120
 Gln Val Leu Glu His Pro Pro Gln Glu Gln Ile Ala Leu Leu Ala
 125 130 135
 Pro Glu Pro Leu Leu Val Gly Leu Pro Tyr Thr Val Val Ile His
 140 145 150
 Tyr Ala Gly Asn Leu Ser Glu Thr Phe His Gly Phe Tyr Lys Ser
 155 160 165
 Thr Tyr Arg Thr Lys Glu Gly Glu Leu Arg Ile Leu Ala Ser Thr
 170 175 180
 Gln Phe Glu Pro Thr Ala Ala Arg Met Ala Phe Pro Cys Phe Asp
 185 190 195
 Glu Pro Ala Phe Lys Ala Ser Phe Ser Ile Lys Ile Arg Arg Glu
 200 205 210
 Pro Arg His Leu Ala Ile Ser Asn Met Pro Leu Val Lys Ser Val

	215		220		225
Thr Val Ala Glu Gly Leu Ile Glu Asp	230	His Phe Asp Val Thr Val	235		240
Lys Met Ser Thr Tyr Leu Val Ala Phe	245	Ile Ile Ser Asp Phe Glu	250		255
Ser Val Ser Lys Ile Thr Lys Ser Gly	260	Val Lys Val Ser Val Tyr	265		270
Ala Val Pro Asp Lys Ile Asn Gln Ala	275	Asp Tyr Ala Leu Asp Ala	280		285
Ala Val Thr Leu Leu Glu Phe Tyr Glu	290	Asp Tyr Phe Ser Ile Pro	295		300
Tyr Pro Leu Pro Lys Gln Asp Leu Ala	305	Ala Ile Pro Asp Phe Gln	310		315
Ser Gly Ala Met Glu Asn Trp Gly Leu	320	Thr Thr Tyr Arg Glu Ser	325		330
Ala Leu Leu Phe Asp Ala Glu Lys Ser	335	Ser Ala Ser Ser Lys Leu	340		345
Gly Ile Thr Val Thr Val Ala His Glu	350	Leu Ala His Gln Trp Phe	355		360
Gly Asn Leu Val Thr Met Glu Trp Trp	365	Asn Asp Leu Trp Leu Asn	370		375
Glu Gly Phe Ala Lys Phe Met Glu Phe	380	Val Ser Val Ser Val Thr	385		390
His Pro Glu Leu Lys Val Gly Asp Tyr	395	Phe Phe Gly Lys Cys Phe	400		405
Asp Ala Met Glu Val Asp Ala Leu Asn	410	Ser Ser His Pro Val Ser	415		420
Thr Pro Val Glu Asn Pro Ala Gln Ile	425	Arg Glu Met Phe Asp Asp	430		435
Val Ser Tyr Asp Lys Gly Ala Cys Ile	440	Leu Asn Met Leu Arg Glu	445		450
Tyr Leu Ser Ala Asp Ala Phe Lys Ser	455	Gly Ile Val Gln Tyr Leu	460		465
Gln Lys His Ser Tyr Lys Asn Thr Lys	470	Asn Glu Asp Leu Trp Asp	475		480
Ser Met Ala Ser Ile Cys Pro Thr Asp	485	Gly Val Lys Gly Met Asp	490		495
Gly Phe Cys Ser Arg Ser Gln His Ser	500	Ser Ser Ser Ser His Trp	505		510
His Gln Glu Gly Val Asp Val Lys Thr	515	Met Met Asn Thr Trp Thr	520		525
Leu Gln Arg Gly Phe Pro Leu Ile Thr		Ile Thr Val Arg Gly Arg			

	530		535		540
Asn Val His Met	Lys Gln Glu His Tyr	Met Lys Gly Ser Asp	Gly		
	545	550	555		
Ala Pro Asp Thr	Gly Tyr Leu Trp His	Val Pro Leu Thr Phe	Ile		
	560	565	570		
Thr Ser Lys Ser	Asn Met Val His Arg	Phe Leu Leu Lys Thr	Lys		
	575	580	585		
Thr Asp Val Leu	Ile Leu Pro Glu Glu	Val Glu Trp Ile Lys	Phe		
	590	595	600		
Asn Val Gly Met	Asn Gly Tyr Tyr Ile	Val His Tyr Glu Asp	Asp		
	605	610	615		
Gly Trp Asp Ser	Leu Thr Gly Leu Leu	Lys Gly Thr His Thr	Ala		
	620	625	630		
Val Ser Ser Asn	Asp Arg Ala Ser Leu	Ile Asn Asn Ala Phe	Gln		
	635	640	645		
Leu Val Ser Ile	Gly Lys Leu Ser Ile	Glu Lys Ala Leu Asp	Leu		
	650	655	660		
Ser Leu Tyr Leu	Lys His Glu Thr Glu	Ile Met Pro Val Phe	Gln		
	665	670	675		
Gly Leu Asn Glu	Leu Ile Pro Met Tyr	Lys Leu Met Glu Lys	Arg		
	680	685	690		
Asp Met Asn Glu	Val Glu Thr Gln Phe	Lys Ala Phe Leu Ile	Arg		
	695	700	705		
Leu Leu Arg Asp	Leu Ile Asp Lys Gln	Thr Trp Thr Asp Glu	Gly		
	710	715	720		
Ser Val Ser Glu	Gln Met Leu Arg Ser	Glu Leu Leu Leu Leu	Ala		
	725	730	735		
Cys Val His Asn	Tyr Gln Pro Cys Val	Gln Arg Ala Glu Gly	Tyr		
	740	745	750		
Phe Arg Lys Trp	Lys Glu Ser Asn Gly	Asn Leu Ser Leu Pro	Val		
	755	760	765		
Asp Val Thr Leu	Ala Val Phe Ala Val	Gly Ala Gln Ser Thr	Glu		
	770	775	780		
Gly Trp Asp Phe	Leu Tyr Ser Lys Tyr	Gln Phe Ser Leu Ser	Ser		
	785	790	795		
Thr Glu Lys Ser	Gln Ile Glu Phe Ala	Leu Cys Arg Thr Gln	Asn		
	800	805	810		
Lys Glu Lys Leu	Gln Trp Leu Leu Asp	Glu Ser Phe Lys Gly	Asp		
	815	820	825		
Lys Ile Lys Thr	Gln Glu Phe Pro Gln	Ile Leu Thr Leu Ile	Gly		
	830	835	840		
Arg Asn Pro Val	Gly Tyr Pro Leu Ala	Trp Gln Phe Leu Arg	Lys		

	845		850		855
Asn Trp Asn Lys	Leu Val Gln Lys Phe	Glu Leu Gly Ser Ser	Ser		
	860	865	870		
Ile Ala His Met	Val Met Gly Thr Thr	Asn Gln Phe Ser Thr	Arg		
	875	880	885		
Thr Arg Leu Glu	Glu Val Lys Gly Phe	Phe Ser Ser Leu Lys	Glu		
	890	895	900		
Asn Gly Ser Gln	Leu Arg Cys Val Gln	Gln Thr Ile Glu Thr	Ile		
	905	910	915		
Glu Glu Asn Ile	Gly Trp Met Asp Lys	Asn Phe Asp Lys Ile	Arg		
	920	925	930		
Val Trp Leu Gln	Ser Glu Lys Leu Glu	Arg Met			
	935	940			

<210> 354
 <211> 1587
 <212> DNA
 <213> Homo sapiens

<400> 354
 cagccacaga cgggtcatga gcgcgggtatt actgctggcc ctcctgggggt 50
 tcattcctccc actgccagga gtgcaggcgc tgctctgccca gtttggggaca 100
 gttcagcatg tgtggaaggt gtccgacctc ccccggaat ggaccacctaa 150
 gaacaccagc tgcgacagcg gcttgggggtg ccaggacacg ttgatgtctca 200
 ttgagagcgg accccaagtg agcctggtgc tctccaaggg ctgcacggag 250
 gccaaggacc aggagccccg cgctactgag caccggatgg gccccggcct 300
 ctccctgatc tcctacacct tcgtgtgccg ccaggaggac ttctgcaaca 350
 acctcgttaa ctccctcccg ctttggggccc cacagcccc agcagaccca 400
 ggatccttga ggtgccagct ctgcttgtct atggaaggct gtctggaggg 450
 gacaacagaa gagatctgcc ccaaggggac cacacactgt tatgatggcc 500
 tcctcaggct caggggagga ggcattctct ccaatctgag agtccaggga 550
 tgcatgcccc agccagggtg caacctgctc aatgggacac aggaaattgg 600
 gcccggtgggt atgactgaga actgcaatag gaaagatttt ctgacctgtc 650
 atcgggggac caccattatg acacacggaa acttgggtca agaaccact 700
 gattggacca catcgaatac cgagatgtgc gaggtggggc aggtgtgtca 750
 ggagacgctg ctgctcatag atgtaggact cacatcaacc ctggtgggga 800
 caaaaggctg cagcactgtt ggggctcaaa attcccagaa gaccaccatc 850
 cactcagccc ctcctgggggt gcttgtggcc tcctataccc acttctgtct 900
 ctcggaacctg tgcaatagtg ccagcagcag cagcgttctg ctgaactccc 950

tccctcctca agctgcccct gtcccaggag accggcagtg tcctacctgt 1000
 gtgcagcccc ttggaacctg ttcaagtggc tccccccgaa tgacctgccc 1050
 caggggagccc actcattgtt atgatgggta cattcatctc tcaggagggtg 1100
 ggctgtccac caaaatgagc attcagggct gcgtggccca accttccagc 1150
 ttcttggtga accacaccag acaaatcggg atcttctctg cgcgtgagaa 1200
 gcgtgatgtg cagcctcctg cctctcagca tgagggagggt ggggctgagg 1250
 gcctggagtc tctcacttgg ggggtggggc tggcactggc cccagcgctg 1300
 tgggtggggag tggtttgccc ttctgctaa ctctattacc cccacgattc 1350
 ttcaccgctg ctgaccaccc aactcaacc tccctctgac ctcataacct 1400
 aatggccttg gacaccagat tttttcccat tctgtccatg aatcatcttc 1450
 cccacacaca atcattcata tctactcacc taacagcaac actggggaga 1500
 gcctggagca tccggacttg ccctatggga gaggggagc tggaggagtg 1550
 gctgcatgta tctgataata cagacctgt cctttca 1587

<210> 355

<211> 437

<212> PRT

<213> Homo sapiens

<400> 355

Met	Ser	Ala	Val	Leu	Leu	Leu	Ala	Leu	Leu	Gly	Phe	Ile	Leu	Pro
1				5						10				15
Leu	Pro	Gly	Val	Gln	Ala	Leu	Leu	Cys	Gln	Phe	Gly	Thr	Val	Gln
				20					25					30
His	Val	Trp	Lys	Val	Ser	Asp	Leu	Pro	Arg	Gln	Trp	Thr	Pro	Lys
				35					40					45
Asn	Thr	Ser	Cys	Asp	Ser	Gly	Leu	Gly	Cys	Gln	Asp	Thr	Leu	Met
				50					55					60
Leu	Ile	Glu	Ser	Gly	Pro	Gln	Val	Ser	Leu	Val	Leu	Ser	Lys	Gly
				65					70					75
Cys	Thr	Glu	Ala	Lys	Asp	Gln	Glu	Pro	Arg	Val	Thr	Glu	His	Arg
				80					85					90
Met	Gly	Pro	Gly	Leu	Ser	Leu	Ile	Ser	Tyr	Thr	Phe	Val	Cys	Arg
				95					100					105
Gln	Glu	Asp	Phe	Cys	Asn	Asn	Leu	Val	Asn	Ser	Leu	Pro	Leu	Trp
				110					115					120
Ala	Pro	Gln	Pro	Pro	Ala	Asp	Pro	Gly	Ser	Leu	Arg	Cys	Pro	Val
				125					130					135
Cys	Leu	Ser	Met	Glu	Gly	Cys	Leu	Glu	Gly	Thr	Thr	Glu	Glu	Ile
				140					145					150
Cys	Pro	Lys	Gly	Thr	Thr	His	Cys	Tyr	Asp	Gly	Leu	Leu	Arg	Leu

Asp	Ala	Cys	Ser	Val	Gln	Ile	Leu	Val	Pro	Gly	Leu	Lys	Gly	Asp		35	40	45
Ala	Gly	Glu	Lys	Gly	Asp	Lys	Gly	Ala	Pro	Gly	Arg	Pro	Gly	Arg		50	55	60
Val	Gly	Pro	Thr	Gly	Glu	Lys	Gly	Asp	Met	Gly	Asp	Lys	Gly	Gln		65	70	75
Lys	Gly	Ser	Val	Gly	Arg	His	Gly	Lys	Ile	Gly	Pro	Ile	Gly	Ser		80	85	90
Lys	Gly	Glu	Lys	Gly	Asp	Ser	Gly	Asp	Ile	Gly	Pro	Pro	Gly	Pro		95	100	105
Asn	Gly	Glu	Pro	Gly	Leu	Pro	Cys	Glu	Cys	Ser	Gln	Leu	Arg	Lys		110	115	120
Ala	Ile	Gly	Glu	Met	Asp	Asn	Gln	Val	Ser	Gln	Leu	Thr	Ser	Glu		125	130	135
Leu	Lys	Phe	Ile	Lys	Asn	Ala	Val	Ala	Gly	Val	Arg	Glu	Thr	Glu		140	145	150
Ser	Lys	Ile	Tyr	Leu	Leu	Val	Lys	Glu	Glu	Lys	Arg	Tyr	Ala	Asp		155	160	165
Ala	Gln	Leu	Ser	Cys	Gln	Gly	Arg	Gly	Gly	Thr	Leu	Ser	Met	Pro		170	175	180
Lys	Asp	Glu	Ala	Ala	Asn	Gly	Leu	Met	Ala	Ala	Tyr	Leu	Ala	Gln		185	190	195
Ala	Gly	Leu	Ala	Arg	Val	Phe	Ile	Gly	Ile	Asn	Asp	Leu	Glu	Lys		200	205	210
Glu	Gly	Ala	Phe	Val	Tyr	Ser	Asp	His	Ser	Pro	Met	Arg	Thr	Phe		215	220	225
Asn	Lys	Trp	Arg	Ser	Gly	Glu	Pro	Asn	Asn	Ala	Tyr	Asp	Glu	Glu		230	235	240
Asp	Cys	Val	Glu	Met	Val	Ala	Ser	Gly	Gly	Trp	Asn	Asp	Val	Ala		245	250	255
Cys	His	Thr	Thr	Met	Tyr	Phe	Met	Cys	Glu	Phe	Asp	Lys	Glu	Asn		260	265	270

Met

<210> 358
 <211> 972
 <212> DNA
 <213> Homo sapiens

<400> 358
 agtgactgca gccttcctag atcccctcca ctcggtttct ctctttgcag 50
 gagcaccggc agcaccagtg tgtgagggga gcaggcagcg gtcctagcca 100
 gttccttgat cctgccagac caccagccc ccggcacaga gctgctccac 150

aggcaccatg aggatcatgc tgctattcac agccatcctg gccttcagcc 200
tagctcagag ctttggggct gtctgtaagg agccacagga ggaggtgggt 250
cctggcgggg gccgcagcaa gagggatcca gatctctacc agctgctcca 300
gagactcttc aaaagccact catctctgga gggattgctc aaagccctga 350
gccaggctag cacagatcct aaggaatcaa catctcccga gaaacgtgac 400
atgcatgact tctttgtggg acttatgggc aagaggagcg tccagccaga 450
gggaaagaca ggacctttct taccttcagt gaggggtcct cggccccttc 500
atcccaatca gcttgatcc acaggaaagt cttccctggg aacagaggag 550
cagagacctt tataagactc tcctacggat gtgaatcaag agaacgtccc 600
cagctttggc atcctcaagt atccccogag agcagaatag gtactccact 650
tccggactcc tggactgcat taggaagacc tctttccctg tcccaatccc 700
caggtgcgca cgctcctgtt accctttctc ttccctgttc ttgtaacatt 750
cttggtgctt gactccttct ccatcttttc tacctgaccc tgggtgtggaa 800
actgcatagt gaatatcccc aacccaatg ggcattgact gtagaatacc 850
ctagagtcc tgtagtgctc tacattaaaa atataatgtc tctctctatt 900
cctcaacaat aaaggatttt tgcataatgaa aaaaaaaaaa aaaaaaaaaa 950
aaaaaaaaaa aaaaaaaaaa aa 972

<210> 359
<211> 135
<212> PRT
<213> Homo sapiens

<400> 359
Met Arg Ile Met Leu Leu Phe Thr Ala Ile Leu Ala Phe Ser Leu
1 5 10 15
Ala Gln Ser Phe Gly Ala Val Cys Lys Glu Pro Gln Glu Glu Val
20 25 30
Val Pro Gly Gly Gly Arg Ser Lys Arg Asp Pro Asp Leu Tyr Gln
35 40 45
Leu Leu Gln Arg Leu Phe Lys Ser His Ser Ser Leu Glu Gly Leu
50 55 60
Leu Lys Ala Leu Ser Gln Ala Ser Thr Asp Pro Lys Glu Ser Thr
65 70 75
Ser Pro Glu Lys Arg Asp Met His Asp Phe Phe Val Gly Leu Met
80 85 90
Gly Lys Arg Ser Val Gln Pro Glu Gly Lys Thr Gly Pro Phe Leu
95 100 105
Pro Ser Val Arg Val Pro Arg Pro Leu His Pro Asn Gln Leu Gly
110 115 120

Ser	Thr	Gly	Lys	Ser	Ser	Leu	Gly	Thr	Glu	Glu	Gln	Arg	Pro	Leu
				125					130					135

<210> 360
 <211> 1738
 <212> DNA
 <213> Homo sapiens

<400> 360
 gggcgtctcc ggctgctcct attgagctgt ctgctcgctg tgcccgtgt 50
 gcttgcgtgtg ccgcgcgtgt cgccgctgct accgcgtctg ctggacgcgg 100
 gagacgccag cgagctggtg attggagccc tgcggagagc tcaagcgccc 150
 agctctgccc caggagccca ggctgccccg tgagtcccat agttgctgca 200
 ggagtggagc catgagctgc gtcttgggtg gtgtcatccc cttggggctg 250
 ctgttcctgg tctgcggatc ccaaggctac ctctgcccac acgtcactct 300
 cttagaggag ctgctcagca aataccagca caacgagtct cactcccggg 350
 tccgcagagc catccccagg gaggacaagg aggagatcct catgctgcac 400
 aacaagcttc ggggccagggt gcagcctcag gcctccaaca tggagtacat 450
 ggtgagcgcc ggctccggcc gcagaggctg gcaccggggg tggggcctgg 500
 gccaccagcc tgctctgttc ccagccagc tctgttcccc agccagtgcg 550
 tgtgatggct ggctcagggt ctctctggc aggggaggat cccggctctg 600
 ttctgttttg tttgtttgtt ttgagacagg gtctcactct gccactgacg 650
 ctggagtgca atggcacaat cgtcatgccc tgaaacctta gactcccggg 700
 gttaagcgat cctgcttcag cctcccaagt agctggaact acaggcatgc 750
 accatggtgc ccagctagat tttaaattt ttgtggagat gggggtcttg 800
 ctacgttgcc caggctggtc ttgaactcct aggcctcaagc aatcctcctg 850
 cctcagcctc tcaaagtgtc aggattatag gcatgagtca ccctgtctgg 900
 ctctggctct gttcttaaca ttctgccaaa acaacacacg tgggttcctt 950
 gtgcagagcc tgcctcgttg ccttcatgtc actcttggtg gctccactgg 1000
 gaacacagct ctcagccttt ccacactgga ggcagagtgg ggaggggccc 1050
 agggctgggc tttgctgatg ctgatctcag ctgtgccaca cgctagctgc 1100
 accaccctga cttctcctta gcccggtgta gcctcacttt ccacttgag 1150
 agtccttcct cgcgtggttg ccatgactgt gagataagtc gaggtgtgta 1200
 agggcccggc acagactgac ctgcctcccc aaccctaggt ctttgctaac 1250
 cgggaaagga gctaacggtg acagaagaca gccaagggtc accctcccg 1300
 gtgattgtga tgggtgttcc aggtgtggtt gggcgatgct gctacttgac 1350

cccaagctcc agtgtggaaa cttccttcct ggctgggttt ccagaactac 1400
 agaggaatgg accacagtct tccagggtcc ctccctcgctcc accaaccggg 1450
 agcctccacc ttggccatcc gtcagctatg aatggctttt taaacaaacc 1500
 cacgtcccag cctgggtaac atggtaaagc cccgtctcta caaaaaaatc 1550
 caagttagcc gggcatggtg gtgcgcacct gtagtcccag ctgcagtggg 1600
 actgaggtgg aggtggaggt ggggggtggg agctgaggaa ggaggatcgc 1650
 ttgagcctgg gaagtcgagg ctgcagtgag ctgagattgc accactgcac 1700
 tccagcctgg gtgacagagc aagaccctgt ctcaaaaa 1738

<210> 361
 <211> 159
 <212> PRT
 <213> Homo sapiens

<400> 361
 Met Ser Cys Val Leu Gly Gly Val Ile Pro Leu Gly Leu Leu Phe
 1 5 10 15
 Leu Val Cys Gly Ser Gln Gly Tyr Leu Leu Pro Asn Val Thr Leu
 20 25 30
 Leu Glu Glu Leu Leu Ser Lys Tyr Gln His Asn Glu Ser His Ser
 35 40 45
 Arg Val Arg Arg Ala Ile Pro Arg Glu Asp Lys Glu Glu Ile Leu
 50 55 60
 Met Leu His Asn Lys Leu Arg Gly Gln Val Gln Pro Gln Ala Ser
 65 70 75
 Asn Met Glu Tyr Met Val Ser Ala Gly Ser Gly Arg Arg Gly Trp
 80 85 90
 His Arg Gly Trp Gly Leu Gly His Gln Pro Ala Leu Phe Pro Ser
 95 100 105
 Gln Leu Cys Ser Pro Ala Ser Ala Cys Asp Gly Trp Leu Arg Val
 110 115 120
 Ser Ser Gly Arg Gly Gly Ser Arg Leu Cys Ser Val Leu Phe Val
 125 130 135
 Cys Phe Glu Thr Gly Ser His Ser Ala Thr Asp Ala Gly Val Gln
 140 145 150
 Trp His Asn Arg His Ala Leu Lys Pro
 155

<210> 362
 <211> 422
 <212> DNA
 <213> Homo sapiens

<400> 362
 aaggagaggc caccgggact tcagtgtctc ctccatccca ggagcgcagt 50

ggccactatg ggggtctgggc tgccccctgt cctcctcttg accctccttg 100
gcagctcaca tggaacaggg ccgggtatga ctttgcaact gaagctgaag 150
gagtcttttc tgacaaattc ctcctatgag tccagcttcc tggaattgct 200
tgaaaagctc tgcctcctcc tccatctccc ttcagggacc agcgtcaccc 250
tccaccatgc aagatctcaa caccatgttg tctgcaacac atgacagcca 300
ttgaagcctg tgtccttctt ggcccgggct tttgggccgg ggatgcagga 350
ggcaggcccc gaccctgtct ttcagcaggc cccaccctc ctgagtggca 400
ataaataaaa ttcggtatgc tg 422

<210> 363
<211> 78
<212> PRT
<213> Homo sapiens

<400> 363
Met Gly Ser Gly Leu Pro Leu Val Leu Leu Leu Thr Leu Leu Gly
1 5 10 15
Ser Ser His Gly Thr Gly Pro Gly Met Thr Leu Gln Leu Lys Leu
20 25 30
Lys Glu Ser Phe Leu Thr Asn Ser Ser Tyr Glu Ser Ser Phe Leu
35 40 45
Glu Leu Leu Glu Lys Leu Cys Leu Leu Leu His Leu Pro Ser Gly
50 55 60
Thr Ser Val Thr Leu His His Ala Arg Ser Gln His His Val Val
65 70 75
Cys Asn Thr

<210> 364
<211> 826
<212> DNA
<213> Homo sapiens

<400> 364
aattgtatct gtgtaatggt aaaacaaacg aaataaaata gaaggaaaaa 50
ctttctgagt ttcaaaaaca acagactagt actctaaaga actctttaaa 100
acaattaact gttaggattg cagttatgat tggatattat ttaattctgt 150
ttctgatgtg ggggttcctcc actgtgttct gtgtgctatt aatatttacc 200
attgcagaag cttcattcag tggtgaaaat gaatgcttag tggatctgtg 250
cctcttacgc atatgttaca aattatctgg agttcctaata caatgcagag 300
ttcccctccc ctccgattgt tctaaataat tgaaagatgt ctgctgtgga 350
aaaaggcatg tatttaaaatc tgtatgattc tcaaccatct ttagttggga 400
aaggtccttg aaagccaatg gaaatacttt ttttttttct tggcactaat 450

aaaagatccg gactctgctg aatgcaagct gtgacaacat gctgatgggc 550
 ataaagtctt tgaaaatagt gaagaagatg atggacacac atggctcttg 600
 gatgaaagat gctgtctata actctccaaa ggtgtactta ttaattggat 650
 ccagaaacaa cactgttttg gaatttgcaa acatacgggc attcatggag 700
 gataacacca agccagctcc ccggaagcaa atcctaacac tttcctggca 750
 gggaacaggc caagtgatct acaaagggtt tctatttttt cataaccaag 800
 caacttctaa tgagataatc aaatataacc tgcagaagag gactgtggaa 850
 gatcgaatgc tgctcccagg aggggtaggc cgagcattgg tttaccagca 900
 ctccccctca acttacattg acctggctgt ggatgagcat gggctctggg 950
 ccatccactc tgggccaggc acccatagcc atttggttct caciaagatt 1000
 gagccgggca cactgggagt ggagcattca tgggataccc catgcagaag 1050
 ccaggatgct gaagcctcat tcctcttggtg tggggttctc tatgtggtct 1100
 acagtactgg gggccagggc cctcatcgca tcacctgcat ctatgatcca 1150
 ctgggcacta tcagtgagga ggacttgccc aacttgttct tccccagag 1200
 accaagaagt cactccatga tccattacaa ccccagagat aagcagctct 1250
 atgcctggaa tgaaggaaac cagatcattt acaaactcca gacaaagaga 1300
 aagctgcctc tgaagtaatg cattacagct gtgagaaaga gactgtggc 1350
 tttggcagct gttctacagg acagtgagc tatagcccct tcacaatata 1400
 gtatccctct aatcacacac aggaagagtg tgtagaagtg gaaatacgta 1450
 tgccctcttt cccaaatgtc actgccttag gtatcttcca agagcttaga 1500
 tgagagcata tcatcaggaa agtttcaaca atgtccatta ctccccaaa 1550
 cctcctggct ctcaaggatg accacattct gatacagcct acttcaagcc 1600
 ttttgtttta ctgctcccca gcatttactg taactctgcc atcttccctc 1650
 ccacaattag agttgtatgc cagcccctaa tattcaccac tggcttttct 1700
 ctcccctggc ctttgtgaa gctcttccct ctttttcaaa tgtctattga 1750
 tattctccca ttttactgc ccaactaaaa tactattaat atttcttct 1800
 tttcttttct ttttttgag acaaggctct actatgttgc ccaggctggt 1850
 ctcaaactcc agagctcaag agatcctcct gcctcagcct cctaagtacc 1900
 tgggattaca ggcatgtgcc accacacctg gcttaaaata ctatttctta 1950
 ttgaggttta acctctatct cccctagccc tgtccttcca ctaagcttgg 2000
 tagatgtaat aataaagtga aaatattaac atttgaatat cgctttccag 2050
 gtgtggagtg tttgcacatc attgaattct cgtttcacct ttgtgaaaca 2100

tgcacaagtc ttacagctg tcattctaga gtttaggtga gtaacacaat 2150
 tacaaagtga aagatacagc tagaaaatac tacaaatccc atagtttttc 2200
 cattgcccac ggaagcatca aatacgtatg ttgtttcacc tactcttata 2250
 gtcaatgcgt tcatcgtttc agcctaaaaa taatagtctg tcccttttagc 2300
 cagttttcat gtctgcacaa gacctttcaa taggcctttc aaatgataat 2350
 tcctccagaa aaccagtcta aggggtgagga cccaactct agcctcctct 2400
 tgtcttgctg tcctctgttt ctctctttct gctttaaatt caataaaagt 2450
 gacactgagc aaaaaaaaaa aaaaa 2475

<210> 367
 <211> 402
 <212> PRT
 <213> Homo sapiens

<400> 367
 Met Met Val Ala Leu Arg Gly Ala Ser Ala Leu Leu Val Leu Phe
 1 5 10 15
 Leu Ala Ala Phe Leu Pro Pro Pro Gln Cys Thr Gln Asp Pro Ala
 20 25 30
 Met Val His Tyr Ile Tyr Gln Arg Phe Arg Val Leu Glu Gln Gly
 35 40 45
 Leu Glu Lys Cys Thr Gln Ala Thr Arg Ala Tyr Ile Gln Glu Phe
 50 55 60
 Gln Glu Phe Ser Lys Asn Ile Ser Val Met Leu Gly Arg Cys Gln
 65 70 75
 Thr Tyr Thr Ser Glu Tyr Lys Ser Ala Val Gly Asn Leu Ala Leu
 80 85 90
 Arg Val Glu Arg Ala Gln Arg Glu Ile Asp Tyr Ile Gln Tyr Leu
 95 100 105
 Arg Glu Ala Asp Glu Cys Ile Val Ser Glu Asp Lys Thr Leu Ala
 110 115 120
 Glu Met Leu Leu Gln Glu Ala Glu Glu Glu Lys Lys Ile Arg Thr
 125 130 135
 Leu Leu Asn Ala Ser Cys Asp Asn Met Leu Met Gly Ile Lys Ser
 140 145 150
 Leu Lys Ile Val Lys Lys Met Met Asp Thr His Gly Ser Trp Met
 155 160 165
 Lys Asp Ala Val Tyr Asn Ser Pro Lys Val Tyr Leu Leu Ile Gly
 170 175 180
 Ser Arg Asn Asn Thr Val Trp Glu Phe Ala Asn Ile Arg Ala Phe
 185 190 195
 Met Glu Asp Asn Thr Lys Pro Ala Pro Arg Lys Gln Ile Leu Thr
 200 205 210

Gly	Arg	Phe	Val	Ala	Ser	Cys	Gly	Phe	Thr	Pro	Asp	Val	Lys	Val	
				245					250					255	
Trp	Glu	Val	Cys	Phe	Gly	Lys	Lys	Gly	Glu	Phe	Gln	Glu	Val	Val	
				260					265					270	
Arg	Ala	Phe	Glu	Leu	Lys	Gly	His	Ser	Ala	Ala	Val	His	Ser	Phe	
				275					280					285	
Ala	Phe	Ser	Asn	Asp	Ser	Arg	Arg	Met	Ala	Ser	Val	Ser	Lys	Asp	
				290					295					300	
Gly	Thr	Trp	Lys	Leu	Trp	Asp	Thr	Asp	Val	Glu	Tyr	Lys	Lys	Lys	
				305					310					315	
Gln	Asp	Pro	Tyr	Leu	Leu	Lys	Thr	Gly	Arg	Phe	Glu	Glu	Ala	Ala	
				320					325					330	
Gly	Ala	Ala	Pro	Cys	Arg	Leu	Ala	Leu	Ser	Pro	Asn	Ala	Gln	Val	
				335					340					345	
Leu	Ala	Leu	Ala	Ser	Gly	Ser	Ser	Ile	His	Leu	Tyr	Asn	Thr	Arg	
				350					355					360	
Arg	Gly	Glu	Lys	Glu	Glu	Cys	Phe	Glu	Arg	Val	His	Gly	Glu	Cys	
				365					370					375	
Ile	Ala	Asn	Leu	Ser	Phe	Asp	Ile	Thr	Gly	Arg	Phe	Leu	Ala	Ser	
				380					385					390	
Cys	Gly	Asp	Arg	Ala	Val	Arg	Leu	Phe	His	Asn	Thr	Pro	Gly	His	
				395					400					405	
Arg	Ala	Met	Val	Glu	Glu	Met	Gln	Gly	His	Leu	Lys	Arg	Ala	Ser	
				410					415					420	
Asn	Glu	Ser	Thr	Arg	Gln	Arg	Leu	Gln	Gln	Gln	Leu	Thr	Gln	Ala	
				425					430					435	
Gln	Glu	Thr	Leu	Lys	Ser	Leu	Gly	Ala	Leu	Lys	Lys				
				440					445						

<210> 370
 <211> 1415
 <212> DNA
 <213> Homo sapiens

<400> 370
 tggcctcccc agcttgccag gcacaaggct gagcgggagg aagcgagagg 50
 catctaagca ggcagtgttt tgccttcacc ccaagtgacc atgagaggtg 100
 ccacgcgagt ctcaatcatg ctctctctag taactgtgtc tgactgtgct 150
 gtgatcacag gggcctgtga gcgggatgtc cagtgtgggg caggcacctg 200
 ctgtgccatc agcctgtggc ttogaggggt gcggatgtgc accccgctgg 250
 ggcgggaagg cgaggagtgc caccocggca gccacaaggt ccccttcttc 300
 aggaaacgca agcaccacac ctgtccttgc ttgcccaacc tgctgtgctc 350
 caggttcccg gacggcaggt accgctgctc catggacttg aagaacatca 400

His	Thr	Cys	Pro	Cys	Leu	Pro	Asn	Leu	Leu	Cys	Ser	Arg	Phe	Pro
				80					85					90
Asp	Gly	Arg	Tyr	Arg	Cys	Ser	Met	Asp	Leu	Lys	Asn	Ile	Asn	Phe
				95					100					105

<210> 372
 <211> 1281
 <212> DNA
 <213> Homo sapiens

<400> 372
 agcgcccgagg cgctcggggag gtaaaaggcc ggacagaagg aggcacttga 50
 gaaatgtctt tcctccagga cccaagtttc ttcaccatgg ggatgtgggc 100
 cattgggtgca ggagccctgg gggctgctgc cttggcattg ctgcttgcca 150
 acacagacgt gtttctgtcc aagccccaga aagcgggcct ggagtacctg 200
 gaggatatag acctgaaaac actggagaag gaaccaagga ctttcaaagc 250
 aaaggagcta tgggaaaaaa atggagctgt gattatggcc gtgcggaggc 300
 caggctgttt cctctgtcga gaggaagctg cggatctgtc ctccctgaaa 350
 agcatgttgg accagctggg cgtccccctc tatgcagtgg taaaggagca 400
 catcaggact gaagtgaagg atttccagcc ttatttcaaa ggagaaatct 450
 tcctggatga aaagaaaaag ttctatgggc cacaaggcg gaagatgatg 500
 tttatgggat ttatccgtct gggagtgtgg tacaacttct tccgagcctg 550
 gaacggaggc ttctctggaa acctggaagg agaaggcttc atccttgggg 600
 gagttttcgt ggtgggatca ggaaagcagg gcattcttct tgagcaccga 650
 gaaaaagaat ttggagacaa agtaaaccta ctttctgttc tggaagctgc 700
 taagatgatc aaaccacaga ctttggcctc agagaaaaaa tgattgtgtg 750
 aaactgcca gctcagggat aaccaggac attcacctgt gttcatggga 800
 tgtattgttt cactcgtgt cctaaggag tgagaaacc atttatactc 850
 tactctcagt atggattatt aatgtatatt aatattctgt ttagggccac 900
 taaggcaaaa tagcccaaaa acaagactga caaaaatctg aaaaactaat 950
 gaggattatt aagctaaaac ctgggaaata ggaggcttaa aattgactgc 1000
 caggctgggt gcagtggctc acacctgtaa tcccagcact ttgggaggcc 1050
 aaggtgagca agtcacttga ggtcgggagt togagaccag cctgagcaac 1100
 atggcgaaac cccgtctcta ctaaaaatac aaaaatcacc cgggtgtggg 1150
 ggcaggcacc tgtagtccca gctaccggg aggtgaggc aggagaatca 1200
 cttgaacctg ggaggtggag gttgcgggtg gctgagatca caccactgta 1250
 ttccagcctg ggtgactgag actctaacta a 1281

<210> 373
 <211> 229
 <212> PRT
 <213> Homo sapiens

<400> 373

Met	Ser	Phe	Leu	Gln	Asp	Pro	Ser	Phe	Phe	Thr	Met	Gly	Met	Trp
1				5					10					15
Ser	Ile	Gly	Ala	Gly	Ala	Leu	Gly	Ala	Ala	Ala	Leu	Ala	Leu	Leu
				20					25					30
Leu	Ala	Asn	Thr	Asp	Val	Phe	Leu	Ser	Lys	Pro	Gln	Lys	Ala	Ala
				35					40					45
Leu	Glu	Tyr	Leu	Glu	Asp	Ile	Asp	Leu	Lys	Thr	Leu	Glu	Lys	Glu
				50					55					60
Pro	Arg	Thr	Phe	Lys	Ala	Lys	Glu	Leu	Trp	Glu	Lys	Asn	Gly	Ala
				65					70					75
Val	Ile	Met	Ala	Val	Arg	Arg	Pro	Gly	Cys	Phe	Leu	Cys	Arg	Glu
				80					85					90
Glu	Ala	Ala	Asp	Leu	Ser	Ser	Leu	Lys	Ser	Met	Leu	Asp	Gln	Leu
				95					100					105
Gly	Val	Pro	Leu	Tyr	Ala	Val	Val	Lys	Glu	His	Ile	Arg	Thr	Glu
				110					115					120
Val	Lys	Asp	Phe	Gln	Pro	Tyr	Phe	Lys	Gly	Glu	Ile	Phe	Leu	Asp
				125					130					135
Glu	Lys	Lys	Lys	Phe	Tyr	Gly	Pro	Gln	Arg	Arg	Lys	Met	Met	Phe
				140					145					150
Met	Gly	Phe	Ile	Arg	Leu	Gly	Val	Trp	Tyr	Asn	Phe	Phe	Arg	Ala
				155					160					165
Trp	Asn	Gly	Gly	Phe	Ser	Gly	Asn	Leu	Glu	Gly	Glu	Gly	Phe	Ile
				170					175					180
Leu	Gly	Gly	Val	Phe	Val	Val	Gly	Ser	Gly	Lys	Gln	Gly	Ile	Leu
				185					190					195
Leu	Glu	His	Arg	Glu	Lys	Glu	Phe	Gly	Asp	Lys	Val	Asn	Leu	Leu
				200					205					210
Ser	Val	Leu	Glu	Ala	Ala	Lys	Met	Ile	Lys	Pro	Gln	Thr	Leu	Ala
				215					220					225

Ser Glu Lys Lys

<210> 374
 <211> 744
 <212> DNA
 <213> Homo sapiens

<400> 374

acggaccgag ggttcgaggg agggacacgg accaggaacc tgagctaggt 50
 caaagacgcc cgggccaggt gccccgtcgc aggtgcccct ggccggagat 100

gcggtaggag gggcgagcgc gagaagcccc ttcctcggcg ctgccaaccc 150
gccaccagc ccatggcgaa ccccgggctg gggctgcttc tggcgctggg 200
cctgccgttc ctgctggccc gctggggccg agcctggggg caaatacaga 250
ccacttctgc aaatgagaat agcactgttt tgccttcata caccagctcc 300
agctccgatg gcaacctgcg tccggaagcc atcactgcta tcatcgtggt 350
cttctccctc ttggctgcct tgctcctggc tgtggggctg gcaactgttg 400
tgcggaagct tcgggagaag cggcagacgg agggcaccta ccggcccagt 450
agcgaggagc agttctccca tgcagccgag gcccggggcc ctcaggactc 500
caaggagacg gtgcagggct gcctgcccat ctagggtcccc tctcctgcat 550
ctgtctccct tcattgctgt gtgaccttgg ggaaaggcag tgccctctct 600
gggcagtcag atccaccag tgcttaatat cagggaagaa ggtacttcaa 650
agactctgcc cctgaggtca agagaggatg gggctattca cttttatata 700
tttatataaa attagtagtg agatgtaaaa aaaaaaaaaa aaaa 744

<210> 375
<211> 123
<212> PRT
<213> Homo sapiens

<400> 375
Met Ala Asn Pro Gly Leu Gly Leu Leu Leu Ala Leu Gly Leu Pro
1 5 10 15
Phe Leu Leu Ala Arg Trp Gly Arg Ala Trp Gly Gln Ile Gln Thr
20 25 30
Thr Ser Ala Asn Glu Asn Ser Thr Val Leu Pro Ser Ser Thr Ser
35 40 45
Ser Ser Ser Asp Gly Asn Leu Arg Pro Glu Ala Ile Thr Ala Ile
50 55 60
Ile Val Val Phe Ser Leu Leu Ala Ala Leu Leu Leu Ala Val Gly
65 70 75
Leu Ala Leu Leu Val Arg Lys Leu Arg Glu Lys Arg Gln Thr Glu
80 85 90
Gly Thr Tyr Arg Pro Ser Ser Glu Glu Gln Phe Ser His Ala Ala
95 100 105
Glu Ala Arg Ala Pro Gln Asp Ser Lys Glu Thr Val Gln Gly Cys
110 115 120
Leu Pro Ile

<210> 376
<211> 713
<212> DNA
<213> Homo sapiens

<400> 376
aatatatcat ctatttatca ttaatcaata atgtattctt ttattccaat 50
aacatttggg ttttgggatt ttaattttca aacacagcag aatgacattt 100
tttctgtcac tattattatt gttggtatgt gaagctattt ggagatccaa 150
ttcaggaagc aacacattgg agaatggcta ctttctatca agaaataaag 200
agaaccacag tcaaccacac caatcatctt tagaagacag tgtgactcct 250
accaaagctg tcaaaaccac aggcaagggc atagttaaag gacggaatct 300
tgactcaaga ggggttaattc ttggtgctga agcctggggc aggggtgtaa 350
agaaaaacac ttagattcaa tgattgtaaa ttttaaggcaa atacacatat 400
tagtattacc ttagtgtaat gtatccctgt catatataca ataaggtgaa 450
attataagta ccctatgcag ttggtctggac agttctaaat tggactttat 500
taatttttaa aatcagtaac tgatttatca ctggctatgt gcttagatct 550
acaggagatc atataatttg atacaaataa aagaaaagtg ttctctcccc 600
ttacagaatt gacattttta atgcgataca gttagaatag gaaatatgac 650
attagaaagg aagaatgaca gggagaaagg aaagaaggga aaatgttgcc 700
aaggaaaaaa aaa 713

<210> 377
<211> 90
<212> PRT
<213> Homo sapiens

<400> 377
Met Thr Phe Phe Leu Ser Leu Leu Leu Leu Val Cys Glu Ala
1 5 10 15
Ile Trp Arg Ser Asn Ser Gly Ser Asn Thr Leu Glu Asn Gly Tyr
20 25 30
Phe Leu Ser Arg Asn Lys Glu Asn His Ser Gln Pro Thr Gln Ser
35 40 45
Ser Leu Glu Asp Ser Val Thr Pro Thr Lys Ala Val Lys Thr Thr
50 55 60
Gly Lys Gly Ile Val Lys Gly Arg Asn Leu Asp Ser Arg Gly Leu
65 70 75
Ile Leu Gly Ala Glu Ala Trp Gly Arg Gly Val Lys Lys Asn Thr
80 85 90

<210> 378
<211> 3265
<212> DNA
<213> Homo sapiens

<400> 378
gccaggaata actagagagg aacaatgggg ttattcagag gttttgtttt 50

cctcttagtt ctgtgcctgc tgcaccagtc aaatacttcc ttcattaagc 100
tgaataataa tggctttgaa gatattgtca ttgttataga tcctagtgtg 150
ccagaagatg aaaaaataat tgaacaaata gaggatatgg tgactacagc 200
ttctacgtac ctgtttgaag ccacagaaaa aagatTTTTT ttcaaaaatg 250
tatctatatt aattcctgag aattggaagg aaaatcctca gtacaaaagg 300
ccaaaacatg aaaaccataa acatgotgat gttatagttg caccacctac 350
actcccaggt agagatgaac catacaccaa gcagttcaca gaatgtggag 400
agaaaggcga atacattcac ttcacccctg accttctact tggaaaaaaa 450
caaaatgaat atggaccacc aggcaaatg tttgtccatg agtgggctca 500
cctccggtgg ggagtgtttg atgagtacaa tgaagatcag ctttctacc 550
gtgctaagtc aaaaaaaatc gaagcaacaa ggtgttccgc aggtatctct 600
ggtagaaata gaggtttataa gtgtcaagga ggcagctgtc ttagtagagc 650
atgcagaatt gattctacaa caaaactgta tggaaaagat tgtcaattct 700
ttcctgataa agtacaaaca gaaaaagcat ccataatgtt tatgcaaagt 750
attgattctg ttgttgaatt ttgtaacgaa aaaaccata atcaagaagc 800
tccaagccta caaaacataa agtgcaattt tagaagtaca tgggaggtga 850
ttagcaattc tgaggatttt aaaaacacca taccatggg gacaccacct 900
cctccacctg tcttctcatt gctgaagatc agtcaaagaa ttgtgtgctt 950
agttcttgat aagtctggaa gcatgggggg taaggaccgc ctaaatacgaa 1000
tgaatcaagc agcaaaacat ttctgtctgc agactgttga aaatggatcc 1050
tgggtgggga tgggttcaatt tgatagtact gccactattg taaataagct 1100
aatccaaata aaaagcagtg atgaaagaaa cacactcatg gcaggattac 1150
ctacatatcc tctgggagga acttccatct gctctggaat taaatatgca 1200
tttcaggtga ttggagagct acattcccaa ctcgatggat ccgaagtact 1250
gctgctgact gatggggagg ataacactgc aagttcttgt attgatgaag 1300
tgaaacaaag tggggccatt gttcatttta ttgctttggg aagagctgct 1350
gatgaagcag taatagagat gagcaagata acaggaggaa gtcattttta 1400
tgtttcagat gaagctcaga acaatggcct cattgatgct tttggggctc 1450
ttacatcagg aaatactgat ctctcccaga agtcccttca gctcgaaagt 1500
aagggattaa cactgaatag taatgcctgg atgaacgaca ctgtcataat 1550
tgatagtaca gtgggaaaagg acacgttctt tctcatcaca tggaacagtc 1600
tgcctcccag tatttctctc tgggatccca gtggaacaat aatggaaaat 1650

ttcacagtgg atgcaacttc caaaatggcc tatctcagta ttccaggaac 1700
 tgcaaagggtg ggcacttggg catacaatct tcaagccaaa gcgaacccag 1750
 aacattaac tattacagta acttctcgag cagcaaattc ttctgtgcct 1800
 ccaatcacag tgaatgctaa aatgaataag gacgtaaaca gtttccccag 1850
 cccaatgatt gtttacgcag aaattctaca aggatatgta cctgttcttg 1900
 gagccaatgt gactgctttc attgaatcac agaatggaca tacagaagtt 1950
 ttggaacttt tggataatgg tgcaggcgct gattctttca agaatgatgg 2000
 agtctactcc aggtatttta cagcatatac agaaaatggc agatatagct 2050
 taaaagttcg ggctcatgga ggagcaaaca ctgccaggct aaaattacgg 2100
 cctccactga atagagccgc gtacatacca ggctgggtag tgaacgggga 2150
 aattgaagca aacccgcca gacctgaaat tgatgaggat actcagacca 2200
 ccttgaggga tttcagccga acagcatccg gaggtgcatt tgtggtatca 2250
 caagtcccaa gccttcctt gcctgaccaa taccaccaa gtcaaatac 2300
 agaccttgat gccacagttc atgaggataa gattattctt acatggacag 2350
 caccaggaga taattttgat gttggaaaag ttcaacgtta tatcataaga 2400
 ataagtcaa gtattcttga tctaagagac agttttgatg atgctcttca 2450
 agtaaatact actgatctgt caccaaagga ggccaactcc aaggaaagct 2500
 ttgcatttaa accagaaaat atctcagaag aaaatgcaac ccacatat 2550
 attgccatta aaagtataga taaaagcaat ttgacatcaa aagtatccaa 2600
 cattgcacaa gtaactttgt ttatccctca agcaaactc gatgacattg 2650
 atcctacacc tactcctact cctactccta ctctgataa aagtcataat 2700
 tctggagtta atatttctac gctgggtattg tctgtgattg ggtctgttgt 2750
 aattgttaac tttatttta gtaccaccat ttgaacctta acgaagaaaa 2800
 aaatcttcaa gtagacctag aagagagttt taaaaaaca aacaatgtaa 2850
 gtaaaggata tttctgaatc ttaaaattca tcccatgtgt gatcataaac 2900
 tcataaaaat aattttaaga tgtcggaaaa ggatactttg attaaataaa 2950
 aacactcatg gatatgtaaa aactgtcaag attaaaattt aatagtttca 3000
 tttatttggt attttatttg taagaaatag tgatgaacaa agatcctttt 3050
 tcatactgat acctggttgt atattatttg atgcaacagt tttctgaaat 3100
 gatatttcaa attgcatcaa gaaattaaaa tcacttatct gagtagtcaa 3150
 aatacaagta aaggagagca aataaacaac atttgaaaa aaaaaaaaaa 3200
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3250

[illegible]

<213> Homo sapiens

Ser Thr Trp Glu Val Ile Ser Asn Ser Glu Asp Phe Lys Asn Thr

	275	280	285
Ile Pro Met Val Thr Pro Pro Pro Pro Pro Val Phe Ser Leu Leu	290	295	300
Lys Ile Ser Gln Arg Ile Val Cys Leu Val Leu Asp Lys Ser Gly	305	310	315
Ser Met Gly Gly Lys Asp Arg Leu Asn Arg Met Asn Gln Ala Ala	320	325	330
Lys His Phe Leu Leu Gln Thr Val Glu Asn Gly Ser Trp Val Gly	335	340	345
Met Val His Phe Asp Ser Thr Ala Thr Ile Val Asn Lys Leu Ile	350	355	360
Gln Ile Lys Ser Ser Asp Glu Arg Asn Thr Leu Met Ala Gly Leu	365	370	375
Pro Thr Tyr Pro Leu Gly Gly Thr Ser Ile Cys Ser Gly Ile Lys	380	385	390
Tyr Ala Phe Gln Val Ile Gly Glu Leu His Ser Gln Leu Asp Gly	395	400	405
Ser Glu Val Leu Leu Leu Thr Asp Gly Glu Asp Asn Thr Ala Ser	410	415	420
Ser Cys Ile Asp Glu Val Lys Gln Ser Gly Ala Ile Val His Phe	425	430	435
Ile Ala Leu Gly Arg Ala Ala Asp Glu Ala Val Ile Glu Met Ser	440	445	450
Lys Ile Thr Gly Gly Ser His Phe Tyr Val Ser Asp Glu Ala Gln	455	460	465
Asn Asn Gly Leu Ile Asp Ala Phe Gly Ala Leu Thr Ser Gly Asn	470	475	480
Thr Asp Leu Ser Gln Lys Ser Leu Gln Leu Glu Ser Lys Gly Leu	485	490	495
Thr Leu Asn Ser Asn Ala Trp Met Asn Asp Thr Val Ile Ile Asp	500	505	510
Ser Thr Val Gly Lys Asp Thr Phe Phe Leu Ile Thr Trp Asn Ser	515	520	525
Leu Pro Pro Ser Ile Ser Leu Trp Asp Pro Ser Gly Thr Ile Met	530	535	540
Glu Asn Phe Thr Val Asp Ala Thr Ser Lys Met Ala Tyr Leu Ser	545	550	555
Ile Pro Gly Thr Ala Lys Val Gly Thr Trp Ala Tyr Asn Leu Gln	560	565	570
Ala Lys Ala Asn Pro Glu Thr Leu Thr Ile Thr Val Thr Ser Arg	575	580	585
Ala Ala Asn Ser Ser Val Pro Pro Ile Thr Val Asn Ala Lys Met			

Ser Thr Thr Ile

<210> 380
 <211> 3877
 <212> DNA
 <213> Homo sapiens

<400> 380
 ctccttaggt ggaaaccctg ggagtagagt actgacagca aagaccggga 50
 aagaccatac gtccccgggc aggggtgaca acaggtgtca tctttttgat 100
 ctctgtgtgtg gctgccttcc tatttcaagg aaagacgcca aggtaatttt 150
 gaccagagg agcaatgatg tagccacctc ctaaccttcc cttcttgaac 200
 cccagttat gccaggattt actagagagt gtcaactcaa ccagcaagcg 250
 gctccttcgg cttaacttgt ggttggagga gagaaccttt gtggggctgc 300
 gttctcttag cagtgtcag aagtgacttg cctgagggtg gaccagaaga 350
 aaggaaaagg cccctcttgc tgttggctgc acatcaggaa ggctgtgatg 400
 ggaatgaagg tgaaaacttg gagatttcac ttcagtcatt gcttctgcct 450
 gcaagatcat cctttaaag tagagaagct gctctgtgtg gtggttaact 500
 ccaagaggca gaactcgttc tagaaggaaa tggatgcaag cagctccggg 550
 ggcccaaac gcatgcttcc tgtggtctag ccagggaag cccttccgtg 600
 ggggccccgg ctttgaggga tgccaccggt tctggacgca tggctgattc 650
 ctgaatgatg atggttcgcc gggggtgct tgcgtggatt tcccggtgg 700
 tggttttgct ggtgctcctc tgetgtgcta tctctgtcct gtacatgttg 750
 gcctgcaccc caaaagggtga cgaggagcag ctggcactgc ccagggcaa 800
 cagccccacg gggaaggagg ggtaccaggc cgtccttcag gagtgggagg 850
 agcagcaccg caactacgtg agcagcctga agcggcagat cgcacagctc 900
 aaggaggagc tgcaggagag gagtgagcag ctcaggaatg ggcagtacca 950
 agccagcgat gctgctggcc tgggtctgga caggagcccc ccagagaaaa 1000
 ccaggccga cctcctggcc ttcctgcact cgcagggtgga caaggcagag 1050
 gtgaatgctg gcgtcaagct ggccacagag tatgcagcag tgcctttcga 1100
 tagctttact ctacagaagg tgtaccagct ggagactggc cttaccgcc 1150
 accccgagga gaagcctgtg aggaaggaca agcgggatga gttggtggaa 1200
 gccattgaat cagccttgga gacctgaac aatcctgcag agaacagccc 1250
 caatcaccgt ccttacacgg cctctgattt catagaaggg atctaccgaa 1300

cagaaaggga caaagggaaca ttgtatgagc tcaccttcaa aggggaccac 1350
aaacacgaat tcaaacggct catcttattt cgaccattca gccccatcat 1400
gaaagtgaaa aatgaaaagc tcaacatggc caacacgctt atcaatgtta 1450
tcgtgcctct agcaaaaagg gtggacaagt tccggcagtt catgcagaat 1500
ttcagggaga tgtgcattga gcaggatggg agagtccatc tcaactgttg 1550
ttactttggg aaagaagaaa taaatgaagt caaaggaata cttgaaaaca 1600
cttccaaagc tgccaacttc aggaacttta ccttcatcca gctgaatgga 1650
gaattttctc ggggaaaggg acttgatggt ggagcccgt tctggaaggg 1700
aagcaacgtc cttctctttt tctgtgatgt ggacatctac ttcacatctg 1750
aattcctcaa tacgtgtagg ctgaatacac agccaggga gaaggtattt 1800
tatccagttc ttttcagtca gtacaatcct ggcataatat acggccacca 1850
tgatgcagtc cctcccttgg aacagcagct ggtcataaag aaggaaactg 1900
gattttggag agactttgga tttgggatga cgtgtcagta tcggtcagac 1950
ttcatcaata taggtgggtt tgatctggac atcaaaggct ggggcggaga 2000
ggatgtgcac ctttatcgca agtatctcca cagcaacctc atagtggtag 2050
ggacgcctgt gcgaggactc ttccacctct ggcattgagaa gcgctgcatg 2100
gacgagctga cccccgagca gtacaagatg tgcattgcagt ccaaggccat 2150
gaacgaggca tcccacggcc agctgggcat gctggtgttc aggcacgaga 2200
tagaggctca ccttcgcaaa cagaaacaga agacaagtag caaaaaaaca 2250
tgaactccca gagaaggatt gtgggagaca ctttttcttt ccttttgcaa 2300
ttactgaaag tggctgcaac agagaaaaga cttccataaa ggacgacaaa 2350
agaattggac tgatgggtca gagatgagaa agcctccgat ttctctctgt 2400
tgggcttttt acaacagaaa tcaaaatctc cgctttgcct gcaaaagtaa 2450
cccagttgca ccctgtgaag tgtctgacaa aggcagaatg cttgtgagat 2500
tataagccta atggtgtgga ggttttgatg gtgttttaca tacactgaga 2550
cctgttggtt tgtgtgctca ttgaaatatt catgatttaa gagcagtttt 2600
gtaaaaaatt cattagcatg aaaggcaagc atatttctcc tcatatgaat 2650
gagcctatca gcagggtct agtttctagg aatgctaaaa tatcagaagg 2700
caggagagga gataggctta ttatgatact agtgagtaca ttaagtaaaa 2750
taaaatggac cagaaaagaa aagaaacat aaatatcgtg tcatattttc 2800
ccaagatta accaaaaata atctgcttat ctttttggtt gtccttttaa 2850
ctgtctccgt ttttttcttt tatttaaaaa tgcaactttt ttcccttggtg 2900

agttatagtc tgcttattta attaccactt tgcaagcctt acaagagagc 2950
acaagttggc ctacattttt atatttttta agaagatact ttgagatgca 3000
ttatgagaac tttcagttca aagcatcaaa ttgatgccat atccaaggac 3050
atgccaaatg ctgattctgt caggcactga atgtcaggca ttgagacata 3100
gggaaggaat ggtttgtact aatacagacg tacagatact ttctctgaag 3150
agtattttcg aagaggagca actgaacact ggaggaaaag aaaatgacac 3200
tttctgcttt acagaaaagg aaactcattc agactggtga tatcgtgatg 3250
tacctaaaag tcagaaacca ctttttctcc tcagaagtag ggaccgcttt 3300
cttacctggt taaataaacc aaagtatacc gtgtgaacca aacaatctct 3350
tttcaaaaca ggggtgctcct cctggcttct ggcttcata agaagaaatg 3400
gagaaaaata tatatatata tatatatatt gtgaaagatc aatccatctg 3450
ccagaatcta gtgggatgga agtttttgct acatgttatc caccacaggc 3500
caggtggaag taactgaatt attttttaaa ttaagcagtt ctactcaatc 3550
accaagatgc ttctgaaaat tgcattttat taccatttca aactattttt 3600
taaaaaataaa tacagttaac atagagtggg ttcttcattc atgtgaaaat 3650
tattagccag caccagatgc atgagcta at tctctcttg agtccttgct 3700
tctgtttgct cacagtaaac tcattgttta aaagcttcaa gaacattcaa 3750
gctgttggtg tggttaaaaa tgcattgtat tgatttgtac tggtagttta 3800
tgaaatttaa ttaaaacaca ggccatgaat ggaaggtggt attgcacagc 3850
taataaaaata tgatttgtgg atatgaa 3877

<210> 381

<211> 532

<212> PRT

<213> Homo sapiens

<400> 381

Met	Met	Met	Val	Arg	Arg	Gly	Leu	Leu	Ala	Trp	Ile	Ser	Arg	Val
1				5					10					15
Val	Val	Leu	Leu	Val	Leu	Leu	Cys	Cys	Ala	Ile	Ser	Val	Leu	Tyr
				20					25					30
Met	Leu	Ala	Cys	Thr	Pro	Lys	Gly	Asp	Glu	Glu	Gln	Leu	Ala	Leu
				35					40					45
Pro	Arg	Ala	Asn	Ser	Pro	Thr	Gly	Lys	Glu	Gly	Tyr	Gln	Ala	Val
				50					55					60
Leu	Gln	Glu	Trp	Glu	Glu	Gln	His	Arg	Asn	Tyr	Val	Ser	Ser	Leu
				65					70					75
Lys	Arg	Gln	Ile	Ala	Gln	Leu	Lys	Glu	Glu	Leu	Gln	Glu	Arg	Ser
				80					85					90

Glu	Gln	Leu	Arg	Asn	Gly	Gln	Tyr	Gln	Ala	Ser	Asp	Ala	Ala	Gly	95	100	105
Leu	Gly	Leu	Asp	Arg	Ser	Pro	Pro	Glu	Lys	Thr	Gln	Ala	Asp	Leu	110	115	120
Leu	Ala	Phe	Leu	His	Ser	Gln	Val	Asp	Lys	Ala	Glu	Val	Asn	Ala	125	130	135
Gly	Val	Lys	Leu	Ala	Thr	Glu	Tyr	Ala	Ala	Val	Pro	Phe	Asp	Ser	140	145	150
Phe	Thr	Leu	Gln	Lys	Val	Tyr	Gln	Leu	Glu	Thr	Gly	Leu	Thr	Arg	155	160	165
His	Pro	Glu	Glu	Lys	Pro	Val	Arg	Lys	Asp	Lys	Arg	Asp	Glu	Leu	170	175	180
Val	Glu	Ala	Ile	Glu	Ser	Ala	Leu	Glu	Thr	Leu	Asn	Asn	Pro	Ala	185	190	195
Glu	Asn	Ser	Pro	Asn	His	Arg	Pro	Tyr	Thr	Ala	Ser	Asp	Phe	Ile	200	205	210
Glu	Gly	Ile	Tyr	Arg	Thr	Glu	Arg	Asp	Lys	Gly	Thr	Leu	Tyr	Glu	215	220	225
Leu	Thr	Phe	Lys	Gly	Asp	His	Lys	His	Glu	Phe	Lys	Arg	Leu	Ile	230	235	240
Leu	Phe	Arg	Pro	Phe	Ser	Pro	Ile	Met	Lys	Val	Lys	Asn	Glu	Lys	245	250	255
Leu	Asn	Met	Ala	Asn	Thr	Leu	Ile	Asn	Val	Ile	Val	Pro	Leu	Ala	260	265	270
Lys	Arg	Val	Asp	Lys	Phe	Arg	Gln	Phe	Met	Gln	Asn	Phe	Arg	Glu	275	280	285
Met	Cys	Ile	Glu	Gln	Asp	Gly	Arg	Val	His	Leu	Thr	Val	Val	Tyr	290	295	300
Phe	Gly	Lys	Glu	Glu	Ile	Asn	Glu	Val	Lys	Gly	Ile	Leu	Glu	Asn	305	310	315
Thr	Ser	Lys	Ala	Ala	Asn	Phe	Arg	Asn	Phe	Thr	Phe	Ile	Gln	Leu	320	325	330
Asn	Gly	Glu	Phe	Ser	Arg	Gly	Lys	Gly	Leu	Asp	Val	Gly	Ala	Arg	335	340	345
Phe	Trp	Lys	Gly	Ser	Asn	Val	Leu	Leu	Phe	Phe	Cys	Asp	Val	Asp	350	355	360
Ile	Tyr	Phe	Thr	Ser	Glu	Phe	Leu	Asn	Thr	Cys	Arg	Leu	Asn	Thr	365	370	375
Gln	Pro	Gly	Lys	Lys	Val	Phe	Tyr	Pro	Val	Leu	Phe	Ser	Gln	Tyr	380	385	390
Asn	Pro	Gly	Ile	Ile	Tyr	Gly	His	His	Asp	Ala	Val	Pro	Pro	Leu	395	400	405

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 385

cagtcagtac aatcctggca taatatacgg ccacccatgat gcagtcoc 48

<210> 386

<211> 1346

<212> DNA

<213> Homo sapiens

<400> 386

gaaagaatgt tgtggctgct cttttttctg gtgactgcc ttcattgctga 50
actctgtcaa ccagggtgcag aaaatgcttt taaagtgaga cttagtatca 100
gaacagctct gggagataaa gcatatgcct gggataccaa tgaagaatac 150
ctcttcaaag cgatggtagc tttctccatg agaaaagtgc ccaacagaga 200
agcaacagaa atttcccatg tctactttg caatgtaacc cagaggggat 250
cattctgggt tgtgggttaca gacccttcaa aaaatcacac ccttctgct 300
gttgagggtgc aatcagccat aagaatgaac aagaaccgga tcaacaatgc 350
cttctttcta aatgaccaa ctctggaatt tttaaaaatc ccttccacac 400
ttgcaccacc catggacca tctgtgcca tctggattat tatatttgg 450
gtgatatttt gcatcatcat agttgcaatt gcactactga ttttatcagg 500
gatctggcaa cgtagaagaa agaacaaga accatctgaa gtggatgacg 550
ctgaagataa gtgtgaaaac atgatcaca ttgaaaatgg catcccctct 600
gatcccctgg acatgaagg gggcatatta atgatgcct catgacagag 650
gatgagaggo tccccctct ctgaagggt gttgttctgc ttcctcaaga 700
aattaaacat ttgtttctgt gtgactgctg agcatcctga aataccaaga 750
gcagatcata tattttgttt caccattctt cttttgtaat aaattttgaa 800
tgtgcttgaa agtgaaaagc aatcaattat accaccaac accactgaaa 850
tcataagcta ttcacgactc aaaatattct aaaatatttt tctgacagta 900
tagtgtataa atgtgggtcat gtggattttg tagttattga ttttaagcatt 950
tttagaaata agatcaggca tatgtatata ttttcacact tcaaagacct 1000
aaggaaaaat aaattttcca gtggagaata catataatat ggtgtagaaa 1050
tcattgaaaa tggatccttt ttgacgatca cttatatcac tctgtatatg 1100
actaagtaaa caaagtgtg aagtaattat tgtaaatgga tggataaaaa 1150
tggaattact catatacagg gtggaatttt atcctgttat cacaccaaca 1200
gttgattata tattttctga atatcagccc ctaataggac aattctat 1250

gttgaccatt tctacaattt gtaaaagtcc aatctgtgct aacttaataa 1300

agtaataatc atctctttttt aaaaaaaaaa aaaaaaaaaa aaaaaa 1346

<210> 387

<211> 212

<212> PRT

<213> Homo sapiens

<400> 387

Met	Leu	Trp	Leu	Leu	Phe	Phe	Leu	Val	Thr	Ala	Ile	His	Ala	Glu
1				5					10					15

Leu	Cys	Gln	Pro	Gly	Ala	Glu	Asn	Ala	Phe	Lys	Val	Arg	Leu	Ser
				20					25					30

Ile	Arg	Thr	Ala	Leu	Gly	Asp	Lys	Ala	Tyr	Ala	Trp	Asp	Thr	Asn
				35					40					45

Glu	Glu	Tyr	Leu	Phe	Lys	Ala	Met	Val	Ala	Phe	Ser	Met	Arg	Lys
				50					55					60

Val	Pro	Asn	Arg	Glu	Ala	Thr	Glu	Ile	Ser	His	Val	Leu	Leu	Cys
				65					70					75

Asn	Val	Thr	Gln	Arg	Val	Ser	Phe	Trp	Phe	Val	Val	Thr	Asp	Pro
				80					85					90

Ser	Lys	Asn	His	Thr	Leu	Pro	Ala	Val	Glu	Val	Gln	Ser	Ala	Ile
				95					100					105

Arg	Met	Asn	Lys	Asn	Arg	Ile	Asn	Asn	Ala	Phe	Phe	Leu	Asn	Asp
				110					115					120

Gln	Thr	Leu	Glu	Phe	Leu	Lys	Ile	Pro	Ser	Thr	Leu	Ala	Pro	Pro
				125					130					135

Met	Asp	Pro	Ser	Val	Pro	Ile	Trp	Ile	Ile	Ile	Phe	Gly	Val	Ile
				140					145					150

Phe	Cys	Ile	Ile	Ile	Val	Ala	Ile	Ala	Leu	Leu	Ile	Leu	Ser	Gly
				155					160					165

Ile	Trp	Gln	Arg	Arg	Arg	Lys	Asn	Lys	Glu	Pro	Ser	Glu	Val	Asp
				170					175					180

Asp	Ala	Glu	Asp	Lys	Cys	Glu	Asn	Met	Ile	Thr	Ile	Glu	Asn	Gly
				185					190					195

Ile	Pro	Ser	Asp	Pro	Leu	Asp	Met	Lys	Gly	Gly	Ile	Leu	Met	Met
				200					205					210

Pro Ser

<210> 388

<211> 1371

<212> DNA

<213> Homo sapiens

<400> 388

aactcaaaact cctctctctg ggaaaacgcg gtgcttgctc ctcccggagt 50

ggccttggca ggggtgttga gccctcggtc tgccccgtcc ggtctctggg 100
 gccaaaggctg ggtttccctc atgtatggca agagctctac tcgtgcggtg 150
 cttcttctcc ttggcataca gctcacagct ctttggccta tagcagctgt 200
 ggaaatttat acctcccggg tgctggaggc tgttaatggg acagatgctc 250
 ggttaaaatg cactttctcc agctttgccc ctgtgggtga tgctctaaca 300
 gtgacctgga attttctgctc tctagacggg ggacctgagc agtttgtatt 350
 ctactaccac atagatccct tccaacccat gagtgggagg ttaaggacc 400
 ggggtgtcttg ggatgggaat cctgagcggg acgatgcctc catccttctc 450
 tggaaactgc agttcgacga caatgggaca tacacctgcc aggtgaagaa 500
 cccacctgat gttgatgggg tgatagggga gatccggctc agcgtcgtgc 550
 aactgtacg cttctctgag atccacttcc tggctctggc cattggctct 600
 gcctgtgcac tgatgatcat aatagtaatt gtagtgggtc tcttcagca 650
 ttaccgaaa aagcgtggg ccgaaagagc tcataaagtg gtggagataa 700
 aatcaaaaga agaggaaagg ctcaaccaag agaaaaaggt ctctgtttat 750
 ttagaagaca cagactaaca attttagatg gaagctgaga tgatttcaa 800
 gaacaagaac ctagtatatt cttgaagtta atggaaactt ttctttggct 850
 tttccagttg tgaccggtt tccaaccagt tctgcagcat attagattct 900
 agacaagcaa caccctctg gagccagcac agtgctctc catatcacca 950
 gtcatacaca gcctcattat taaggtctta ttaatttca gagtgtaaat 1000
 tttttcaagt gtcattagg tttataaac aagaagctac atttttgccc 1050
 ttaagacact acttacagt ttatgacttg tatacacata tattggtatc 1100
 aaaggggata aaagccaatt tgtctgttac atttcctttc acgtatttct 1150
 tttagcagca cttctgctac taaagttaat gtgtttactc tctttccttc 1200
 ccacattctc aattaaaagg tgagctaagc ctctcgggtg tttctgatta 1250
 acagtaaato ctaaattcaa actgttaaata gacattttta ttttatgtc 1300
 tctccttaac tatgagacac atctgttttt actgaatttc tttcaatatt 1350
 ccaggtgata gatttttgtc g 1371

<210> 389
 <211> 215
 <212> PRT
 <213> Homo sapiens

<400> 389
 Met Tyr Gly Lys Ser Ser Thr Arg Ala Val Leu Leu Leu Leu Gly
 1 5 10 15

Ile	Gln	Leu	Thr	Ala	Leu	Trp	Pro	Ile	Ala	Ala	Val	Glu	Ile	Tyr	
				20					25					30	
Thr	Ser	Arg	Val	Leu	Glu	Ala	Val	Asn	Gly	Thr	Asp	Ala	Arg	Leu	
				35					40					45	
Lys	Cys	Thr	Phe	Ser	Ser	Phe	Ala	Pro	Val	Gly	Asp	Ala	Leu	Thr	
				50					55					60	
Val	Thr	Trp	Asn	Phe	Arg	Pro	Leu	Asp	Gly	Gly	Pro	Glu	Gln	Phe	
				65					70					75	
Val	Phe	Tyr	Tyr	His	Ile	Asp	Pro	Phe	Gln	Pro	Met	Ser	Gly	Arg	
				80					85					90	
Phe	Lys	Asp	Arg	Val	Ser	Trp	Asp	Gly	Asn	Pro	Glu	Arg	Tyr	Asp	
				95					100					105	
Ala	Ser	Ile	Leu	Leu	Trp	Lys	Leu	Gln	Phe	Asp	Asp	Asn	Gly	Thr	
				110					115					120	
Tyr	Thr	Cys	Gln	Val	Lys	Asn	Pro	Pro	Asp	Val	Asp	Gly	Val	Ile	
				125					130					135	
Gly	Glu	Ile	Arg	Leu	Ser	Val	Val	His	Thr	Val	Arg	Phe	Ser	Glu	
				140					145					150	
Ile	His	Phe	Leu	Ala	Leu	Ala	Ile	Gly	Ser	Ala	Cys	Ala	Leu	Met	
				155					160					165	
Ile	Ile	Ile	Val	Ile	Val	Val	Val	Leu	Phe	Gln	His	Tyr	Arg	Lys	
				170					175					180	
Lys	Arg	Trp	Ala	Glu	Arg	Ala	His	Lys	Val	Val	Glu	Ile	Lys	Ser	
				185					190					195	
Lys	Glu	Glu	Glu	Arg	Leu	Asn	Gln	Glu	Lys	Lys	Val	Ser	Val	Tyr	
				200					205					210	
Leu	Glu	Asp	Thr	Asp											
				215											

<210> 390
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 390
 ccgaggccat ctagaggcca gagc 24

 <210> 391
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 391
 acaggcagag ccaatggcca gagc 24

099893.EE26860

<210> 392
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 392
gagaggactg cgggagtttg ggacctttgt gcagacgtgc tcatg 45

<210> 393
<211> 471
<212> DNA
<213> Homo sapiens

<400> 393
gcatttttgt ctgtgctccc tgatcttcag gtcaccacca tgaagttctt 50
agcagtcctg gtactcttgg gagtttccat ctttctggtc tctgcccaga 100
atccgacaac agctgctcca gctgacacgt atccagctac tggctcctgct 150
gatgatgaag cccctgatgc tgaaccact gctgctgcaa ccaactgacgac 200
cactgctgct cctaccactg caaccacgcg tgcttctacc actgctcgta 250
aagacattcc agttttaccc aaatggggtg gggatctccc gaatggtaga 300
gtgtgtccct gagatggaat cagcttgagt cttctgcaat tggtcacaac 350
tattcatgct tcctgtgatt tcatccaact acttaccttg cctacgatat 400
cccctttatc tctaatacgt ttattttctt tcaaataaaa aataactatg 450
agcaacataa aaaaaaaaaa a 471

<210> 394
<211> 90
<212> PRT
<213> Homo sapiens

<400> 394
Met Lys Phe Leu Ala Val Leu Val Leu Leu Gly Val Ser Ile Phe
1 5 10 15
Leu Val Ser Ala Gln Asn Pro Thr Thr Ala Ala Pro Ala Asp Thr
20 25 30
Tyr Pro Ala Thr Gly Pro Ala Asp Asp Glu Ala Pro Asp Ala Glu
35 40 45
Thr Thr Ala Ala Ala Thr Thr Ala Thr Thr Ala Ala Pro Thr Thr
50 55 60
Ala Thr Thr Ala Ala Ser Thr Thr Ala Arg Lys Asp Ile Pro Val
65 70 75
Leu Pro Lys Trp Val Gly Asp Leu Pro Asn Gly Arg Val Cys Pro
80 85 90

<210> 395
<211> 25

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 395
gctccctgat cttcatgtca ccacc 25

<210> 396
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 396
caggacaca ctctaccatt cgggag 26

<210> 397
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 397
ccatctttct ggtctctgcc cagaatccga caacagctgc tc 42

<210> 398
<211> 907
<212> DNA
<213> Homo sapiens

<400> 398
ggactctgaa ggtcccaagc agctgctgag gcccccaagg aagtgggttc 50
aaccttggac ccctaggggt ctggatttgc tggttaacaa gataacctga 100
gggcaggacc ccatagggga atgctacctc ctgcccttcc acctgccctg 150
gtgttcacgg tggcctggtc cctccttgcc gagagagtgt cctgggtcag 200
ggacgcagag gacgctcaca gactccagcc ctttggttacc gagaggacac 250
ttggcaaggt ccagcgatgg tccggagtcc acacacagac tggcggcagg 300
gcaggagggg gacagttctg ttgtgcttgg ttggacagta agaggggtctt 350
ggccagtcca ggggtggggg cggcaaactc cataaagaac cagaggggtct 400
gggccccggc cacagagtca tctgcccagc tcctctgctg ctggccagtg 450
ggagtggcac gaggtggggc tttgtgccag taaaaccaca ggctggattt 500
gcctgcgggc catggtccct gtctagggca gcaattctca accttcttgc 550
tctcaggacc ccaaagagct ttcattgtat ctattgattt ttaccacatt 600
agcaattaa actgagaaat gggccgggca cggtggtca cgctgtaat 650

cccagcactt tgggaggccg aggcgggtgg atcacctgag atcaggagtt 700
 caagaccagc ctggccaaca tgggtgaaacc ttgtctacta aaaatacaaa 750
 aaattagcca ggcacagtgg tgtgcactgg tagtcccagt tactcgggag 800
 gctgaggcag gaaaatcgct tgaacccagg aggcggacgt tgcggtgagc 850
 cgagatcgcg ccgctgattc cagcctgggc gacaagagtg agactccatc 900
 tcacaca 907

<210> 399
 <211> 120
 <212> PRT
 <213> Homo sapiens

<400> 399
 Met Leu Pro Pro Ala Leu Pro Pro Ala Leu Val Phe Thr Val Ala
 1 5 10 15
 Trp Ser Leu Leu Ala Glu Arg Val Ser Trp Val Arg Asp Ala Glu
 20 25 30
 Asp Ala His Arg Leu Gln Pro Phe Val Thr Glu Arg Thr Leu Gly
 35 40 45
 Lys Val Gln Arg Trp Ser Gly Val His Thr Gln Thr Gly Gly Arg
 50 55 60
 Ala Gly Gly Gly Gln Phe Cys Cys Ala Trp Leu Asp Ser Lys Arg
 65 70 75
 Val Leu Ala Ser Pro Gly Trp Gly Ala Ala Asn Ser Ile Lys Asn
 80 85 90
 Gln Arg Val Trp Ala Pro Ala Thr Glu Ser Ser Ala Gln Leu Leu
 95 100 105
 Cys Cys Trp Pro Val Gly Val Ala Arg Gly Gly Ala Leu Cys Gln
 110 115 120

<210> 400
 <211> 893
 <212> DNA
 <213> Homo sapiens

<400> 400
 gtcattgccag tgcctgctct gtgcctgctc tgggccctgg caatggtgac 50
 ccggcctgcc tcagcggccc ccatgggagg cccagaactg gcacagcatg 100
 aggagctgac cctgctcttc catgggaccc tgcagctggg ccaggccctc 150
 aacggtgtgt acaggaccac ggagggacgg ctgacaaagg ccaggaacag 200
 cctgggtctc tatggccgca caatagaact cctggggcag gaggtcagcc 250
 ggggccggga tgcagcccag gaacttcggg caagcctgtt ggagactcag 300
 atggaggagg atattctgca gctgcaggca gaggccacag ctgaggtgct 350
 gggggaggtg gccaggcac agaaggtgct acgggacagc gtgcagcggc 400

tagaagtcca gctgaggagc gcctggctgg gccctgccta ccgagaattt 450
 gaggtcttaa aggcacacgc tgacaagcag agccacatcc tatgggccct 500
 cacaggccac gtgcagcggc agaggcggga gatggtggca cagcagcatc 550
 ggctgcgaca gatccaggag agactccaca cagcggcgct cccagcctga 600
 atctgcctgg atggaactga ggaccaatca tgctgcaagg aacacttcca 650
 cgccccgtga ggccccctgtg cagggaggag ctgcctgttc actgggatca 700
 gccagggcgc cgggccccac ttctgagcac agagcagaga cagacgcagg 750
 cggggacaaa ggcagaggat gtagcccat tggggagggg tggaggaagg 800
 acatgtaccc ttctatgcct acacaccct cattaagca gagtcgtggc 850
 atttcaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa 893

<210> 401
 <211> 198
 <212> PRT
 <213> Homo sapiens

<400> 401
 Met Pro Val Pro Ala Leu Cys Leu Leu Trp Ala Leu Ala Met Val
 1 5 10 15
 Thr Arg Pro Ala Ser Ala Ala Pro Met Gly Gly Pro Glu Leu Ala
 20 25 30
 Gln His Glu Glu Leu Thr Leu Leu Phe His Gly Thr Leu Gln Leu
 35 40 45
 Gly Gln Ala Leu Asn Gly Val Tyr Arg Thr Thr Glu Gly Arg Leu
 50 55 60
 Thr Lys Ala Arg Asn Ser Leu Gly Leu Tyr Gly Arg Thr Ile Glu
 65 70 75
 Leu Leu Gly Gln Glu Val Ser Arg Gly Arg Asp Ala Ala Gln Glu
 80 85 90
 Leu Arg Ala Ser Leu Leu Glu Thr Gln Met Glu Glu Asp Ile Leu
 95 100 105
 Gln Leu Gln Ala Glu Ala Thr Ala Glu Val Leu Gly Glu Val Ala
 110 115 120
 Gln Ala Gln Lys Val Leu Arg Asp Ser Val Gln Arg Leu Glu Val
 125 130 135
 Gln Leu Arg Ser Ala Trp Leu Gly Pro Ala Tyr Arg Glu Phe Glu
 140 145 150
 Val Leu Lys Ala His Ala Asp Lys Gln Ser His Ile Leu Trp Ala
 155 160 165
 Leu Thr Gly His Val Gln Arg Gln Arg Arg Glu Met Val Ala Gln
 170 175 180
 Gln His Arg Leu Arg Gln Ile Gln Glu Arg Leu His Thr Ala Ala

Leu Pro Ala

<210> 402
 <211> 1915
 <212> DNA
 <213> Homo sapiens

<400> 402
 ggcaacatgg ctcagcaggc ttgccccaga gccatggcaa agaatggact 50
 tgtaatttgc atcctggtga tcaccttact cctggaccag accaccagcc 100
 acacatccag attaaaagcc aggaagcaca gcaaacgtcg agtgagagac 150
 aaggatggag atctgaagac tcaaattgaa aagctctgga cagaagtcaa 200
 tgccttgaag gaaattcaag ccctgcagac agtctgtctc cgaggcacta 250
 aagttcacia gaaatgctac cttgcttcag aaggtttgaa gcatttccat 300
 gaggccaatg aagactgcat ttccaaagga ggaatcctgg ttatccccag 350
 gaactccgac gaaatcaacg ccctccaaga ctatggtaaa aggagcctgc 400
 caggtgtcaa tgacttttgg ctgggcatca atgacatggt cacggaaggc 450
 aagtttggtg acgtcaacgg aatcgctatc tccttcctca actgggaccg 500
 tgcacagcct aacggtggca agcgagaaaa ctgtgtcctg ttctcccaat 550
 cagctcaggg caagtggagt gatgaggcct gtgcgagcag caagagatac 600
 atatgcgagt tcaccatccc taaataggtc tttctccaat gtgtcctcca 650
 agcaagattc atcataactt ataggttcat gatctctaag atcaagtaaa 700
 aatcataatt tttacttatt aaaaaattgc aacacaagat caatgtccat 750
 agcaatatga tagcatcagc caattttgct aacacatttc tttgggattt 800
 tgcccttcct ggggtatagg ggatcagaaa tattgatcca tgtgcacgca 850
 gataaaatgg cttctgctaa acagactaaa atctttctct ctagtctttc 900
 tcacttgtac aaaccagtt tgttttcaaa aaatcacagt agcaatgcaa 950
 ctcatcactc tagaaaagca agcttaggct acctgaaaga ttttcccttg 1000
 gaagtttagc gtatgtttga ctaacaaaaa ttccctacat cagagactct 1050
 aggtgctata taatccaaaa acttttcagc ctgttgctca ttctgtccca 1100
 tgctggcaat aataccttgt cagcccatta cccttatttt gaattgctcc 1150
 atctcctggg gggacttgta tcttgtctgc catatcagaa cacaaacccc 1200
 tgaagagggt ctgatttgat tttttttttt tcttcatgcc tacccttttt 1250
 ttggaagttt ccagccgcaa tttgaaatga aatgacaagg tgtatatttg 1300

	155		160		165
Ala Gln Pro Asn Gly Gly Lys Arg Glu Asn Cys Val Leu Phe Ser					
	170		175		180
Gln Ser Ala Gln Gly Lys Trp Ser Asp Glu Ala Cys Arg Ser Ser					
	185		190		195
Lys Arg Tyr Ile Cys Glu Phe Thr Ile Pro Lys					
	200		205		

<210> 404
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 404
 cctgggtatc cccaggaact ccgac 25

<210> 405
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 405
 ctcttgctgc tgcgacaggc etc 23

<210> 406
 <211> 46
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 406
 cgccctccaa gactatggta aaaggagcct gccaggtgtc aatgac 46

<210> 407
 <211> 570
 <212> DNA
 <213> Homo sapiens

<400> 407
 gcgaggaccg ggtataagaa gcctcgtggc cttgcccggg cagccgcagg 50
 ttccccgcgc gccccgagcc cccgcgccat gaagctcgcc gccctcctgg 100
 ggctctgcgt ggccctgtcc tgcagctccg ctgctgcttt cttagtgggc 150
 tcggccaagc ctgtggccca gcctgtcgct gcgctggagt cggcggcgga 200
 ggccggggcc gggaccctgg ccaaccccct cggcaccctc aaccgcgtga 250
 agctcctgct gagcagcctg ggcatccccg tgaaccacct catagagggc 300
 tcccagaagt gtgtggctga gctgggtccc caggccgtgg gggccgtgaa 350

[illegible]

```

<400> 408
Met  Lys  Leu  Ala  Ala  Leu  Leu  Gly  Leu  Cys  Val  Ala  Leu  Ser  Cys
  1          5          10          15

Ser  Ser  Ala  Ala  Ala  Phe  Leu  Val  Gly  Ser  Ala  Lys  Pro  Val  Ala
          20          25          30

Gln  Pro  Val  Ala  Ala  Leu  Glu  Ser  Ala  Ala  Glu  Ala  Gly  Ala  Gly
          35          40          45

Thr  Leu  Ala  Asn  Pro  Leu  Gly  Thr  Leu  Asn  Pro  Leu  Lys  Leu  Leu
          50          55          60

Leu  Ser  Ser  Leu  Gly  Ile  Pro  Val  Asn  His  Leu  Ile  Glu  Gly  Ser
          65          70          75

Gln  Lys  Cys  Val  Ala  Glu  Leu  Gly  Pro  Gln  Ala  Val  Gly  Ala  Val
          80          85          90

Lys  Ala  Leu  Lys  Ala  Leu  Leu  Gly  Ala  Leu  Thr  Val  Phe  Gly
          95          100

```

<400> 409					
tgaaggactt	ttccaggacc	caaggccaca	cactggaagt	cttgagctg	50
aagggaggca	ctccttggcc	tccgcagccg	atcacatgaa	ggtggtgcca	100
agtctcctgc	tctccgtcct	cctggcacag	gtgtggctgg	tacccggctt	150
ggccccagt	cctcagtcgc	cagagacccc	agcccctcag	aaccagacca	200
gcagggtagt	gcaggctccc	agggaggaag	aggaagatga	gcaggaggcc	250
agcgaggaga	aggccggtga	ggaagagaaa	gcctggctga	tggccagcag	300
gcagcagctt	gccaaggaga	cttcaaactt	cggattcagc	ctgctgcgaa	350
agatctccat	gaggcacgat	ggcaacatgg	tcttctctcc	atttggcatg	400
tccttggcca	tgacaggctt	gatgctgggg	gccacagggc	cgactgaaac	450
ccagatcaag	agagggctcc	acttgcaagg	cctgaagccc	accaagcccc	500

ggctcctgcc ttccctcttt aagggaactca gagagaccct ctcccgcaac 550
 ctggaactgg gcctctcaca ggggagtttt gccttcatcc acaaggattt 600
 tgatgtcaaa gagactttct tcaattttatc caagaggtat tttgatacag 650
 agtgcgtgcc tatgaatttt cgcaatgcct cacaggccaa aaggctcatg 700
 aatcattaca ttaacaaaga gactcggggg aaaattccca aactgtttga 750
 tgagattaat cctgaaacca aattaattct tgtggattac atcttgttca 800
 aagggaaatg gttgacccca tttgaccctg tcttcaccga agtcgacact 850
 ttccacctgg acaagtacaa gaccattaag gtgcccata tgtacggtgc 900
 aggcaagttt gcctccacct ttgacaagaa ttttcgttgt catgtcctca 950
 aactgcccta ccaaggaaat gccaccatgc tgggtggtcct catggagaaa 1000
 atgggtgacc acctcgccct tgaagactac ctgaccacag acttggtgga 1050
 gacatggctc agaaacatga aaaccagaaa catggaagtt ttctttccga 1100
 agttcaagct agatcagaag tatgagatgc atgagctgct taggcagatg 1150
 ggaatcagaa gaatcttctc accctttgct gaccttagtg aactctcagc 1200
 tactggaaga aatctccaag tatccagggt tttacgaaga acagtgattg 1250
 aagttgatga aaggggcact gaggcagtgg caggaatctt gtcagaaatt 1300
 actgcttatt ccatgcctcc tgatcatcaa gtggaccggc catttcattt 1350
 catgatctat gaagaaacct ctggaatgct tctgtttctg ggcagggtgg 1400
 tgaatccgac tctcctataa ttcaggacat gcataagcac ttcgtgctgt 1450
 agtagatgct gaatctgagg tatcaaacac acacaggata ccagcaatgg 1500
 atggcagggg agagtgttcc ttttgttctt aactagttta ggggtgttctc 1550
 aaataaatac agtagtcccc acttatctga gggggataca ttcaaagacc 1600
 cccagcagat gcctgaaacg gtggacagtg ctgaacctta tatatatttt 1650
 ttcctacaca tacataccta tgataaagtt taatttataa attaggcaca 1700
 gtaagagatt aacaataata acaacattaa gtaaaatgag ttacttgaac 1750
 gcaagcactg caataccata acagtcaaac tgattataga gaaggctact 1800
 aagtgactca tgggcgagga gcatagacag tgtggagaca ttgggcaagg 1850
 ggagaattca catcctgggt gggacagagc aggacgatgc aagattccat 1900
 cccactactc agaatggcat gctgcttaag acttttagat tgtttatttc 1950
 tggaattttt catttaatgt ttttggacca tggttgacca tggttactg 2000
 agactgcaga aagcaaaacc atggataagg gaggactact acaaaagcat 2050
 taaattgata catatttttt aaaaaaaaaa aaaaaaaaaa 2089

<210> 410
 <211> 444
 <212> PRT
 <213> Homo sapiens

<400> 410

Met	Lys	Val	Val	Pro	Ser	Leu	Leu	Leu	Ser	Val	Leu	Leu	Ala	Gln
1				5					10					15
Val	Trp	Leu	Val	Pro	Gly	Leu	Ala	Pro	Ser	Pro	Gln	Ser	Pro	Glu
				20					25					30
Thr	Pro	Ala	Pro	Gln	Asn	Gln	Thr	Ser	Arg	Val	Val	Gln	Ala	Pro
				35					40					45
Arg	Glu	Glu	Glu	Glu	Asp	Glu	Gln	Glu	Ala	Ser	Glu	Glu	Lys	Ala
				50					55					60
Gly	Glu	Glu	Glu	Lys	Ala	Trp	Leu	Met	Ala	Ser	Arg	Gln	Gln	Leu
				65					70					75
Ala	Lys	Glu	Thr	Ser	Asn	Phe	Gly	Phe	Ser	Leu	Leu	Arg	Lys	Ile
				80					85					90
Ser	Met	Arg	His	Asp	Gly	Asn	Met	Val	Phe	Ser	Pro	Phe	Gly	Met
				95					100					105
Ser	Leu	Ala	Met	Thr	Gly	Leu	Met	Leu	Gly	Ala	Thr	Gly	Pro	Thr
				110					115					120
Glu	Thr	Gln	Ile	Lys	Arg	Gly	Leu	His	Leu	Gln	Ala	Leu	Lys	Pro
				125					130					135
Thr	Lys	Pro	Gly	Leu	Leu	Pro	Ser	Leu	Phe	Lys	Gly	Leu	Arg	Glu
				140					145					150
Thr	Leu	Ser	Arg	Asn	Leu	Glu	Leu	Gly	Leu	Ser	Gln	Gly	Ser	Phe
				155					160					165
Ala	Phe	Ile	His	Lys	Asp	Phe	Asp	Val	Lys	Glu	Thr	Phe	Phe	Asn
				170					175					180
Leu	Ser	Lys	Arg	Tyr	Phe	Asp	Thr	Glu	Cys	Val	Pro	Met	Asn	Phe
				185					190					195
Arg	Asn	Ala	Ser	Gln	Ala	Lys	Arg	Leu	Met	Asn	His	Tyr	Ile	Asn
				200					205					210
Lys	Glu	Thr	Arg	Gly	Lys	Ile	Pro	Lys	Leu	Phe	Asp	Glu	Ile	Asn
				215					220					225
Pro	Glu	Thr	Lys	Leu	Ile	Leu	Val	Asp	Tyr	Ile	Leu	Phe	Lys	Gly
				230					235					240
Lys	Trp	Leu	Thr	Pro	Phe	Asp	Pro	Val	Phe	Thr	Glu	Val	Asp	Thr
				245					250					255
Phe	His	Leu	Asp	Lys	Tyr	Lys	Thr	Ile	Lys	Val	Pro	Met	Met	Tyr
				260					265					270
Gly	Ala	Gly	Lys	Phe	Ala	Ser	Thr	Phe	Asp	Lys	Asn	Phe	Arg	Cys
				275					280					285

His	Val	Leu	Lys	Leu	Pro	Tyr	Gln	Gly	Asn	Ala	Thr	Met	Leu	Val
				290					295					300
Val	Leu	Met	Glu	Lys	Met	Gly	Asp	His	Leu	Ala	Leu	Glu	Asp	Tyr
				305					310					315
Leu	Thr	Thr	Asp	Leu	Val	Glu	Thr	Trp	Leu	Arg	Asn	Met	Lys	Thr
				320					325					330
Arg	Asn	Met	Glu	Val	Phe	Phe	Pro	Lys	Phe	Lys	Leu	Asp	Gln	Lys
				335					340					345
Tyr	Glu	Met	His	Glu	Leu	Leu	Arg	Gln	Met	Gly	Ile	Arg	Arg	Ile
				350					355					360
Phe	Ser	Pro	Phe	Ala	Asp	Leu	Ser	Glu	Leu	Ser	Ala	Thr	Gly	Arg
				365					370					375
Asn	Leu	Gln	Val	Ser	Arg	Val	Leu	Arg	Arg	Thr	Val	Ile	Glu	Val
				380					385					390
Asp	Glu	Arg	Gly	Thr	Glu	Ala	Val	Ala	Gly	Ile	Leu	Ser	Glu	Ile
				395					400					405
Thr	Ala	Tyr	Ser	Met	Pro	Pro	Val	Ile	Lys	Val	Asp	Arg	Pro	Phe
				410					415					420
His	Phe	Met	Ile	Tyr	Glu	Glu	Thr	Ser	Gly	Met	Leu	Leu	Phe	Leu
				425					430					435
Gly	Arg	Val	Val	Asn	Pro	Thr	Leu	Leu						
				440										

<210> 411
 <211> 636
 <212> DNA
 <213> Homo sapiens

<400> 411
 ctgggatcag ccactgcagc tccctgagca ctctctacag agacgcggac 50
 cccagacatg aggaggctcc tccctggtcac cagcctggtg gttgtgctgc 100
 tgtgggaggc aggtgcagtc ccagcaccca aggtccctat caagatgcaa 150
 gtcaaacact ggccctcaga gcaggaccca gagaaggcct ggggcgcccg 200
 tgtggtggag cctccggaga aggacgacca gctggtggtg ctgttccctg 250
 tccagaagcc gaaactcttg accaccgagg agaagccacg aggtcagggc 300
 aggggccccca tccttccagg caccaaggcc tggatggaga ccgaggacac 350
 cctgggccgt gtcctgagtc ccgagcccga ccatgacagc ctgtaccacc 400
 ctccgcctga ggaggaccag ggcgaggaga ggccccggtt gtgggtgatg 450
 ccaaatacacc aggtgctcct gggaccggag gaagaccaag accacatcta 500
 ccacccccag tagggctcca ggggccatca ctgccccgc cctgtcccaa 550
 ggcccaggct gttgggactg ggaccctccc taccctgccc cagctagaca 600

aataaacccc agcaggcaaa aaaaaaaaaa aaaaaa 636

<210> 412

<211> 151

<212> PRT

<213> Homo sapiens

<400> 412

Met Arg Arg Leu Leu Leu Val Thr Ser Leu Val Val Val Leu Leu
1 5 10 15
Trp Glu Ala Gly Ala Val Pro Ala Pro Lys Val Pro Ile Lys Met
20 25 30
Gln Val Lys His Trp Pro Ser Glu Gln Asp Pro Glu Lys Ala Trp
35 40 45
Gly Ala Arg Val Val Glu Pro Pro Glu Lys Asp Asp Gln Leu Val
50 55 60
Val Leu Phe Pro Val Gln Lys Pro Lys Leu Leu Thr Thr Glu Glu
65 70 75
Lys Pro Arg Gly Gln Gly Arg Gly Pro Ile Leu Pro Gly Thr Lys
80 85 90
Ala Trp Met Glu Thr Glu Asp Thr Leu Gly Arg Val Leu Ser Pro
95 100 105
Glu Pro Asp His Asp Ser Leu Tyr His Pro Pro Pro Glu Glu Asp
110 115 120
Gln Gly Glu Glu Arg Pro Arg Leu Trp Val Met Pro Asn His Gln
125 130 135
Val Leu Leu Gly Pro Glu Glu Asp Gln Asp His Ile Tyr His Pro
140 145 150
Gln

<210> 413

<211> 1176

<212> DNA

<213> Homo sapiens

<400> 413

agaaagctgc actctgttga gctccagggc gcagtggagg gagggagtga 50
aggagctctc tgtacccaag gaaagtgcag ctgagactca gacaagatta 100
caatgaacca actcagcttc ctgctgtttc tcatagcgac caccagagga 150
tggagtacag atgaggctaa tacttacttc aaggaatgga cctgttcttc 200
gtctccatct ctgcccagaa gctgcaagga aatcaaagac gaatgtccta 250
gtgcatttga tggcctgtat tttctccgca ctgagaatgg tggtatctac 300
cagaccttct gtgacatgac ctctgggggt ggcggtgga ccctggtggc 350
cagcgtgcat gagaatgaca tgcgtgggaa gtgcacggtg ggcgatcgct 400

ggtccagtca gcagggcagc aaagcagact acccagaggg ggaaggcaac 450
 tgggccaact acaacacctt tggatctgca gaggcggcca cgagcgatga 500
 ctacaagaac cctggctact acgacatcca ggccaaggac ctgggcatct 550
 ggcacgtgcc caataagtcc cccatgcagc actggagaaa cagctccctg 600
 ctgaggtacc gcacggacac tggcttcctc cagacactgg gacataatct 650
 gtttggcatc taccagaaat atccagtga atattggagaa ggaaagtgtt 700
 ggactgacaa cggcccgggtg atccctgtgg tctatgattt tggcgacgcc 750
 cagaaaacag catcttatta ctcaccctat ggccagcggg aattcactgc 800
 gggatttgtt cagttcaggg tatttaataa cgagagagca gccaacgcct 850
 tgtgtgctgg aatgaggggtc accggatgta aactgagca tcaactgcatt 900
 ggtggaggag gatactttcc agaggccagt cccagcagt gtggagattt 950
 ttctggtttt gattggagtg gatatggaac tcatgttggt tacagcagca 1000
 gccgtgagat aactgaggca gctgtgcttc tattctatcg ttgagagttt 1050
 tgtgggaggg aaccagacc tctcctccca accatgagat cccaaggatg 1100
 gagaacaact taccagtag ctagaatgtt aatggcagaa gagaaaacaa 1150
 taaatcatat tgactcaaga aaaaaa 1176

<210> 414
 <211> 313
 <212> PRT
 <213> Homo sapiens

<400> 414
 Met Asn Gln Leu Ser Phe Leu Leu Phe Leu Ile Ala Thr Thr Arg
 1 5 10 15
 Gly Trp Ser Thr Asp Glu Ala Asn Thr Tyr Phe Lys Glu Trp Thr
 20 25 30
 Cys Ser Ser Ser Pro Ser Leu Pro Arg Ser Cys Lys Glu Ile Lys
 35 40 45
 Asp Glu Cys Pro Ser Ala Phe Asp Gly Leu Tyr Phe Leu Arg Thr
 50 55 60
 Glu Asn Gly Val Ile Tyr Gln Thr Phe Cys Asp Met Thr Ser Gly
 65 70 75
 Gly Gly Gly Trp Thr Leu Val Ala Ser Val His Glu Asn Asp Met
 80 85 90
 Arg Gly Lys Cys Thr Val Gly Asp Arg Trp Ser Ser Gln Gln Gly
 95 100 105
 Ser Lys Ala Asp Tyr Pro Glu Gly Asp Gly Asn Trp Ala Asn Tyr
 110 115 120
 Asn Thr Phe Gly Ser Ala Glu Ala Ala Thr Ser Asp Asp Tyr Lys

	125		130		135
Thr His Asn Ser	Ser Val Thr Ser Ala	Ala Ser Ser Val Thr	Ile		
	140	145	150		
Thr Thr Thr Met	His Ser Glu Ala Lys	Lys Gly Ser Lys Phe	Asp		
	155	160	165		
Thr Gly Ser Phe	Val Gly Gly Ile Val	Leu Thr Leu Gly Val	Leu		
	170	175	180		
Ser Ile Leu Tyr	Ile Gly Cys Lys Met	Tyr Tyr Ser Arg Arg	Gly		
	185	190	195		
Ile Arg Tyr Arg	Thr Ile Asp Glu His	Asp Ala Ile Ile			
	200	205			

<210> 417
 <211> 1728
 <212> DNA
 <213> Homo sapiens

<400> 417
 cagccgggtc ccaagcctgt gcctgagcct gagcctgagc ctgagcccga 50
 gccgggagcc ggtcgcgggg gctccgggct gtgggaccgc tgggccccca 100
 gcgatggcga ccctgtgggg aggccttctt cggcttggct ccttgctcag 150
 cctgtcgtgc ctggcgcttt ccgtgctgct gctggcgcag ctgtcagacg 200
 ccgccaagaa tttcgaggat gtcagatgta aatgtatctg ccctccctat 250
 aaagaaaatt ctgggcatat ttataataag aacatatctc agaaagattg 300
 tgattgcctt catgtttgtg agcccatgcc tgtgcggggg cctgatgtag 350
 aagcatactg tctacgctgt gaatgcaa atgaagaaag aagctctgtc 400
 acaatcaagg ttaccattat aatttatctc tccatttttg gccttctact 450
 tctgtacatg gtatatctta ctctggttga gcccatactg aagaggcgcc 500
 tctttggaca tgcacagttg atacagagtg atgatgatat tggggatcac 550
 cagccttttg caaatgcaca cgatgtgcta gcccgcctcc gcagtcgagc 600
 caacgtgctg aacaaggtag aatatgcaca gcagcgctgg aagcttcaag 650
 tccaagagca gcgaaagtct gtctttgacc ggcattgtgt cctcagctaa 700
 ttgggaattg aattcaaggt gactagaaag aaacaggcag acaactggaa 750
 agaactgact gggttttgct gggtttcatt ttaatacctt gttgatttca 800
 ccaactgttg ctggaagatt caaaactgga agcaaaaact tgcttgattt 850
 ttttttcttg ttaacgtaat aatagagaca tttttaaaag cacacagctc 900
 aaagtcagcc aataagtctt ttcctatttg tgactttttac taataaaaat 950
 aaatctgcct gtaaattatc ttgaagtcct ttacctggaa caagcactct 1000

ctttttcacc acatagtttt aacttgactt tcaagataat tttcaggggtt 1050
 tttgttggtt ttgttttttg tttgtttgtt ttggtgggag aggggagggga 1100
 tgcctgggaa gtggttaaca acttttttca agtcacttta ctaaacaaac 1150
 ttttgtaaag agaccttacc ttctattttc gagtttcatt tatattttgc 1200
 agtgtagcca gcctcatcaa agagctgact tactcatttg acttttgcac 1250
 tgactgtatt atctgggtat ctgctgtgtc tgcacttcat ggtaaacggg 1300
 atctaaaatg cctggtggct tttcacaaaa agcagatttt cttcatgtac 1350
 tgtgatgtct gatgcaatgc atcctagaac aaactggcca tttgctagtt 1400
 tactctaaag actaaacata gtcttggtgt gtgtgggtctt actcatcttc 1450
 tagtaccttt aaggacaaat cctaaggact tggacacttg caataaagaa 1500
 attttatttt aaaccaagc ctccctggat tgataatata tacacatttg 1550
 tcagcatttc cggtcgtggt gagaggcagc tgtttgagct ccaatatgtg 1600
 cagctttgaa ctagggctgg ggttgtgggt gcctcttctg aaaggtctaa 1650
 ccattattgg ataactggct tttttcttcc tatgtcctct ttggaatgta 1700
 acaataaaaa taatttttga aacatcaa 1728

<210> 418
 <211> 198
 <212> PRT
 <213> Homo sapiens

<400> 418
 Met Ala Thr Leu Trp Gly Gly Leu Leu Arg Leu Gly Ser Leu Leu
 1 5 10 15
 Ser Leu Ser Cys Leu Ala Leu Ser Val Leu Leu Leu Ala Gln Leu
 20 25 30
 Ser Asp Ala Ala Lys Asn Phe Glu Asp Val Arg Cys Lys Cys Ile
 35 40 45
 Cys Pro Pro Tyr Lys Glu Asn Ser Gly His Ile Tyr Asn Lys Asn
 50 55 60
 Ile Ser Gln Lys Asp Cys Asp Cys Leu His Val Val Glu Pro Met
 65 70 75
 Pro Val Arg Gly Pro Asp Val Glu Ala Tyr Cys Leu Arg Cys Glu
 80 85 90
 Cys Lys Tyr Glu Glu Arg Ser Ser Val Thr Ile Lys Val Thr Ile
 95 100 105
 Ile Ile Tyr Leu Ser Ile Leu Gly Leu Leu Leu Tyr Met Val
 110 115 120
 Tyr Leu Thr Leu Val Glu Pro Ile Leu Lys Arg Arg Leu Phe Gly
 125 130 135

His	Ala	Gln	Leu	Ile	Gln	Ser	Asp	Asp	Asp	Ile	Gly	Asp	His	Gln
				140					145					150
Pro	Phe	Ala	Asn	Ala	His	Asp	Val	Leu	Ala	Arg	Ser	Arg	Ser	Arg
				155					160					165
Ala	Asn	Val	Leu	Asn	Lys	Val	Glu	Tyr	Ala	Gln	Gln	Arg	Trp	Lys
				170					175					180
Leu	Gln	Val	Gln	Glu	Gln	Arg	Lys	Ser	Val	Phe	Asp	Arg	His	Val
				185					190					195
Val	Leu	Ser												

<210> 419
 <211> 681
 <212> DNA
 <213> Homo sapiens

<400> 419
 gcacctgcga ccaccgtgag cagtcattggc gtactccaca gtgcagagag 50
 tcgctctggc ttctggggtt gtcctggctc tgtcgtgct gctgccaag 100
 gccttcctgt cccgcgggaa gcggcaggag ccgcccga cacctgaagg 150
 aaaattgggc cgatttccac ctatgatgca tcatcaccag gcaccctcag 200
 atggccagac tcctggggct cgtttccaga ggtctcacct tgccgaggca 250
 tttgcaaagg ccaaaggatc aggtggagggt gctggaggag gaggtagtgg 300
 aagaggctctg atggggcaga ttattccaat ctacggtttt gggatttttt 350
 tatatatact gtacattcta tttaaggtaa gtagaatcat cctaatacata 400
 ttacatcaat gaaaatctaa tatggcgata aaaatcattg tctacattaa 450
 aacttcttat agttcataaa attatttcaa atccatcatc tctttaaatc 500
 ctgcctctc ttcatgaggt acttaggata gccattattt cagtttcaca 550
 taagaatgtt tactcaatgt ttaagtgtt tgccccaaaa ttcacaacta 600
 acaaggcaga actaggactt gaacatggat cttttggttc ttaatccagt 650
 gagtataca attcaatgca ctcccctgcc a 681

<210> 420
 <211> 128
 <212> PRT
 <213> Homo sapiens

Met	Ala	Tyr	Ser	Thr	Val	Gln	Arg	Val	Ala	Leu	Ala	Ser	Gly	Leu
1				5					10					15
Val	Leu	Ala	Leu	Ser	Leu	Leu	Leu	Pro	Lys	Ala	Phe	Leu	Ser	Arg
				20					25					30
Gly	Lys	Arg	Gln	Glu	Pro	Pro	Pro	Thr	Pro	Glu	Gly	Lys	Leu	Gly
				35					40					45

Arg Phe Pro Pro Met Met His His His Gln Ala Pro Ser Asp Gly
50 55 60

Gln Thr Pro Gly Ala Arg Phe Gln Arg Ser His Leu Ala Glu Ala
65 70 75

Phe Ala Lys Ala Lys Gly Ser Gly Gly Gly Ala Gly Gly Gly Gly
80 85 90

Ser Gly Arg Gly Leu Met Gly Gln Ile Ile Pro Ile Tyr Gly Phe
95 100 105

Gly Ile Phe Leu Tyr Ile Leu Tyr Ile Leu Phe Lys Val Ser Arg
110 115 120

Ile Ile Leu Ile Ile Leu His Gln
125

<210> 421
<211> 1630
<212> DNA
<213> Homo sapiens

<400> 421
cggctcgagt gcagctgtgg ggagatttca gtgcattgcc tcccctgggt 50
gctcttcac tttgatttga aagttgagag cagcatgttt tgcccactga 100
aactcatcct gctgccagtg ttactggatt attccttggg cctgaatgac 150
ttgaatgttt ccccgctga gctaacagtc catgtgggtg attcagctct 200
gatgggatgt gttttccaga gcacagaaga caaatgtata ttcaagatag 250
actggactct gtcaccagga gagcacgcca aggacgaata tgtgctatac 300
tattactcca atctcagtgt gcctattggg cgcttcocaga accgcgtaca 350
cttgatgggg gacatcttat gcaatgatgg ctctctcctg ctccaagatg 400
tgcaagaggc tgaccagga acctatatct gtgaaatccg cctcaaaggg 450
gagagccagg tgttcaagaa ggcggtggta ctgcatgtgc ttccagagga 500
gcccaaagag ctcatggtcc atgtgggtgg attgattcag atgggatgtg 550
ttttccagag cacagaagtg aaacacgtga ccaaggtaga atggatatatt 600
tcaggacggc gcgcaaagga ggagattgta tttcgttact accacaaact 650
caggatgtct gtggagtact ccagagctg gggccacttc cagaatcgtg 700
tgaacctggt gggggacatt ttccgcaatg acggttccat catgcttcaa 750
ggagtgaggg agtcagatgg aggaaactac acctgcagta tccacctagg 800
gaacctggtg ttcaagaaaa ccatttgtgt gcatgtcagc ccggaagagc 850
ctcgaacact ggtgaccccc gcagccctga ggctcttggt cttgggtggt 900
aatcagttgg tgatcattgt gggaattgtc tgtgccacaa tctgtctgct 950
ccctgttctg atattgatcg tgaagaagac ctgtggaaat aagagttcag 1000

tgaattctac agtcttgggtg aagaacacga agaagactaa tccagagata 1050
aaagaaaaac cctgccatit tgaaagatgt gaaggggaga aacacattta 1100
ctccccaata attgtacggg aggtgatcga ggaagaagaa ccaagtgaaa 1150
aatcagaggc cacctacatg accatgcacc cagtttggcc ttctctgagg 1200
tcagatcgga acaactcact tgaaaaaaag tcaggtgggg gaatgccaaa 1250
aacacagcaa gccttttgag aagaatggag agtcccttca tctcagcagc 1300
ggtggagact ctctcctgtg tgtgtcctgg gccactctac cagtgatttc 1350
agactccgc tctcccagct gtcctcctgt ctcatgttt ggtcaatata 1400
ctgaagatgg agaatttggg gcctggcaga gagactggac agctctggag 1450
gaacaggcct gctgagggga ggggagcatg gacttggcct ctggagtggg 1500
aactggccc tgggaaccag gctgagctga gtggcctcaa accccccgtt 1550
ggatcagacc ctctgtggg cagggttctt agtggatgag ttactgggaa 1600
gaatcagaga taaaaacaa cccaaatcaa 1630

<210> 422
<211> 394
<212> PRT
<213> Homo sapiens

<400> 422
Met Phe Cys Pro Leu Lys Leu Ile Leu Leu Pro Val Leu Leu Asp
1 5 10 15
Tyr Ser Leu Gly Leu Asn Asp Leu Asn Val Ser Pro Pro Glu Leu
20 25 30
Thr Val His Val Gly Asp Ser Ala Leu Met Gly Cys Val Phe Gln
35 40 45
Ser Thr Glu Asp Lys Cys Ile Phe Lys Ile Asp Trp Thr Leu Ser
50 55 60
Pro Gly Glu His Ala Lys Asp Glu Tyr Val Leu Tyr Tyr Tyr Ser
65 70 75
Asn Leu Ser Val Pro Ile Gly Arg Phe Gln Asn Arg Val His Leu
80 85 90
Met Gly Asp Ile Leu Cys Asn Asp Gly Ser Leu Leu Leu Gln Asp
95 100 105
Val Gln Glu Ala Asp Gln Gly Thr Tyr Ile Cys Glu Ile Arg Leu
110 115 120
Lys Gly Glu Ser Gln Val Phe Lys Lys Ala Val Val Leu His Val
125 130 135
Leu Pro Glu Glu Pro Lys Glu Leu Met Val His Val Gly Gly Leu
140 145 150
Ile Gln Met Gly Cys Val Phe Gln Ser Thr Glu Val Lys His Val

	125		130		135
Thr Leu Leu Lys	Ile Asp Asn Arg Asn	Ile Val Glu Tyr Ile	Lys		
	140	145	150		
Ala Arg Thr His	Leu Ile Arg Trp Val	Gly Leu Ser Arg Gln	Lys		
	155	160	165		
Ser Asn Glu Val	Trp Lys Trp Glu Asp	Gly Ser Val Ile Ser	Glu		
	170	175	180		
Asn Met Phe Glu	Phe Leu Glu Asp Gly	Lys Gly Asn Met Asn	Cys		
	185	190	195		
Ala Tyr Phe His	Asn Gly Lys Met His	Pro Thr Phe Cys Glu	Asn		
	200	205	210		
Lys His Tyr Leu	Met Cys Glu Arg Lys	Ala Gly Met Thr Lys	Val		
	215	220	225		

Asp Gln Leu Pro

<210> 425
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 425
 tgcagcccct gtgacacaaa ctgg 24

<210> 426
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 426
 ctgagataac cgagccatcc tccac 26

<210> 427
 <211> 49
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 427
 gcttcctgac actaaggctg tctgctagtc agaattgcct caaaaagag 49

<210> 428
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 428
ccaccaatgg cagccccacc t 21

<210> 429
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 429
gactgccctc cctgcca 17

<210> 430
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 430
caaaaagcct ggaagtcttc aaag 24

<210> 431
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 431
cagctggact gcaggtgcta 20

<210> 432
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 432
cagtgagcac agcaagtgtc ct 22

<210> 433
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 433
ggccacctcc ttgagtcttc agttccct 28

<210> 434
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

 <400> 434
 caactactgg ctaaagctgg tgaa 24

 <210> 435
 <211> 27
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 435
 cctttctgta taggtgatac ccaatga 27

 <210> 436
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 436
 tggccatccc taccagaggc aaaa 24

 <210> 437
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 437
 ctgaagacga cgcggttac ta 22

 <210> 438
 <211> 19
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 438
 ggcagaaatg ggaggcaga 19

 <210> 439
 <211> 30
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 439
 tgctctgttg gctacggctt tagtccctag 30

 <210> 440
 <211> 22

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 440
agcagcagcc atgtagaatg aa 22

<210> 441
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 441
aatacgaaca gtgcacgctg at 22

<210> 442
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 442
tccagagagc caagcacggc aga 23

<210> 443
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 443
tctagccagc ttggctccaa ta 22

<210> 444
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 444
cctggctcta gcaccaactc ata 23

<210> 445
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 445
tcagtggccc taaggagatg ggcct 25

<210> 446
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 446
 caggatacag tgggaatctt gaga 24

 <210> 447
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 447
 cctgaagggc ttggagctta gt 22

 <210> 448
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 448
 tctttggcca tttcccatgg ctca 24

 <210> 449
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 449
 cccatggcga ggaggaat 18

 <210> 450
 <211> 19
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 450
 tgcgtacgtg tgccttcag 19

 <210> 451
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

<400> 451
 cagcacccca ggcagtctgt gtgt 24

 <210> 452
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 452
 aacgtgctac acgaccagtg tact 24

 <210> 453
 <211> 27
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 453
 cacagcatat tcagatgact aaatcca 27

 <210> 454
 <211> 31
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 454
 ttgttttagtt ctccaccgtg tctccacaga a 31

 <210> 455
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 455
 tgtcagaatg caacctggct t 21

 <210> 456
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 456
 tgatgtgcoct ggctcagaac 20

 <210> 457
 <211> 24
 <212> DNA
 <213> Artificial Sequence

```

<220>
<223> Synthetic oligonucleotide probe

<400> 457
    tgcacctaga tgtccccagc accc 24

<210> 458
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 458
    aagatgcgcc aggcttctta 20

<210> 459
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 459
    ctctgtacg gtctgctcac ttat 24

<210> 460
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 460
    tggctgtcag tccagtgtgc atgg 24

<210> 461
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 461
    gcatagggat agataagatc ctgctttat 29

<210> 462
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 462
    caaattaaag tacccatcag gagagaa 27

<210> 463
<211> 37

```

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 463
 aagttgctaa atatatacat tatctgcgcc aagtcca 37

 <210> 464
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 464
 gtgctgcca caattcatga 20

 <210> 465
 <211> 26
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 465
 gtccttggtgta tgggtctgaa ttatat 26

 <210> 466
 <211> 31
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 466
 actctctgca cccacagtc accactatct c 31

 <210> 467
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 467
 ctgaggaacc agccatgtct ct 22

 <210> 468
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 468
 gaccagatgc aggtacagga tga 23

<210> 469
 <211> 25
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 469
 ctgccccttc agtgatgcca acctt 25

 <210> 470
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 470
 ggggtggaggc tcactgagta ga 22

 <210> 471
 <211> 28
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 471
 caatacaggc aatgaaactc tgcttctt 28

 <210> 472
 <211> 36
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 472
 tcctcttaag cataggccat tttctcagtt tagaca 36

 <210> 473
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 473
 ggtggtcttg cttggtctca c 21

 <210> 474
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

<400> 474
 ccgtcgttca gcaacatgac 20

 <210> 475
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 475
 accgcctacc gctgtgccca 20

 <210> 476
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 476
 cagtaaaacc acaggctgga ttt 23

 <210> 477
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 477
 cctgagagca agaaggttga gaat 24

 <210> 478
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 478
 tagacaggga ccatggcccg ca 22

 <210> 479
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 479
 tgggctgtag aagagttggtt g 21

 <210> 480
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

 <400> 480
 tccacacttg gccagtttat 20

 <210> 481
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 481
 cccaacttct cccttttgga ccct 24

 <210> 482
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 482
 gtcccttcac tgtttagagc atga 24

 <210> 483
 <211> 26
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 483
 actctccccc tcaacagcct cctgag 26

 <210> 484
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 484
 gtggtcaggg cagatccttt 20

 <210> 485
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 485
 acagatccag gagagactcc aca 23

 <210> 486
 <211> 21

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 486
 agcggcgctc ccagcctgaa t 21

 <210> 487
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 487
 catgattggc cctcagttcc atc 23

 <210> 488
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 488
 atagagggct cccagaagtg 20

 <210> 489
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 489
 cagggccttc agggccttca c 21

 <210> 490
 <211> 19
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 490
 gctcagccaa acactgtca 19

 <210> 491
 <211> 17
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 491
 ggggccctga cagtgtt 17

<210> 492
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 492
ctgagccgag actggagcat ctacac 26

<210> 493
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 493
gtgggcagcg tcttgtc 17

<210> 494
<211> 1231
<212> DNA
<213> Homo Sapien

<400> 494
cccacgcgtc cgcgcagtcg cgcagttctg cctccgcctg ccagtctcgc 50
ccgcgatccc ggcccggggc tgtggcgtcg actccgaccc aggcagccag 100
cagcccgcgc gggagccgga ccgccgccgg aggagctcgg acggcatgct 150
gagccccctc ctttgctgaa gcccgagtgc ggagaagccc gggcaaacgc 200
aggctaagga gaccaaagcg gcgaagtgc gagacagcgg acaagcagcg 250
gaggagaagg aggaggaggc gaaccagag aggggcagca aaagaagcgg 300
tgggtggtggg cgtcgtggcc atggcggcgg ctatcgccag ctcgctcatc 350
cgtcagaaga ggcaagcccg cgagcgcgag aaatccaacg cctgcaagtg 400
tgtcagcagc ccagcaaag gcaagaccag ctgcgacaaa aacaagttaa 450
atgtcttttc ccgggtcaaa ctcttcggct ccaagaagag gcgcagaaga 500
agaccagagc ctcagcttaa gggatatagt accaagctat acagccgaca 550
aggctaccac ttgcagctgc aggcggatgg aaccattgat ggcaccaaag 600
atgaggacag cacttacact ctgtttaacc tcatccctgt gggctctgca 650
gtggtggcta tccaaggagt tcaaaccaag ctgtacttgg caatgaacag 700
tgagggatac ttgtacacct cggaactttt cacacctgag tgcaaattca 750
aagaatcagt gtttgaaaat tattatgtga catattcatc aatgatatac 800
cgtcagcagc agtcaggccg aggggtggtat ctgggtctga acaaagaagg 850
agagatcatg aaaggcaacc atgtgaagaa gaacaagcct gcagctcatt 900

ttctgcctaa accactgaaa gtggccatgt acaaggagcc atcactgcac 950
gatctcacgg agttctcccg atctggaagc gggaccccaa ccaagagcag 1000
aagtgtctct ggcggtgctga acggaggcaa atccatgagc cacaatgaat 1050
caacgtagcc agtgagggca aaagaagggc tctgtaacag aaccttacct 1100
ccaggtgctg ttgaattctt ctagcagtcc ttcacccaaa agttcaaatt 1150
tgtcagtgcac atttaccaaaa caaacaggca gagttcacta ttctatctgc 1200
cattagacct tcttatcatc cataactaaag c 1231

<210> 495
<211> 245
<212> PRT
<213> Homo Sapien

<400> 495
Met Ala Ala Ala Ile Ala Ser Ser Leu Ile Arg Gln Lys Arg Gln
1 5 10 15
Ala Arg Glu Arg Glu Lys Ser Asn Ala Cys Lys Cys Val Ser Ser
20 25 30
Pro Ser Lys Gly Lys Thr Ser Cys Asp Lys Asn Lys Leu Asn Val
35 40 45
Phe Ser Arg Val Lys Leu Phe Gly Ser Lys Lys Arg Arg Arg Arg
50 55 60
Arg Pro Glu Pro Gln Leu Lys Gly Ile Val Thr Lys Leu Tyr Ser
65 70 75
Arg Gln Gly Tyr His Leu Gln Leu Gln Ala Asp Gly Thr Ile Asp
80 85 90
Gly Thr Lys Asp Glu Asp Ser Thr Tyr Thr Leu Phe Asn Leu Ile
95 100 105
Pro Val Gly Leu Arg Val Val Ala Ile Gln Gly Val Gln Thr Lys
110 115 120
Leu Tyr Leu Ala Met Asn Ser Glu Gly Tyr Leu Tyr Thr Ser Glu
125 130 135
Leu Phe Thr Pro Glu Cys Lys Phe Lys Glu Ser Val Phe Glu Asn
140 145 150
Tyr Tyr Val Thr Tyr Ser Ser Met Ile Tyr Arg Gln Gln Gln Ser
155 160 165
Gly Arg Gly Trp Tyr Leu Gly Leu Asn Lys Glu Gly Glu Ile Met
170 175 180
Lys Gly Asn His Val Lys Lys Asn Lys Pro Ala Ala His Phe Leu
185 190 195
Pro Lys Pro Leu Lys Val Ala Met Tyr Lys Glu Pro Ser Leu His
200 205 210
Asp Leu Thr Glu Phe Ser Arg Ser Gly Ser Gly Thr Pro Thr Lys

	215		220		225
Ser Arg Ser Val	Ser Gly Val Leu Asn Gly Gly Lys Ser Met Ser				
	230		235		240
His Asn Glu Ser Thr					
	245				

<210> 496
 <211> 1471
 <212> DNA
 <213> Homo Sapien

<400> 496
 ccaggatgga gctggggcct gtatagccat attattgttc tatgctacta 50
 gacatggggg ggacttggtg aaaaaggat tatccagcca gaggggtctgg 100
 gagccctgtc ttactgaacc tgggcaacct ggatattctg agacatattt 150
 tggggggatt tcagtgaaaa aagtggggga tccctccat ttagagtgtg 200
 gcaaaggaaa aaacaccaag gttgggttcc ttctgacat tggcagtgcc 250
 ccagtagggg tgggatgagc gaattattccc aaagctaaag tccacacccc 300
 ttagattac aagagtggat ttggcaggag tgtgccccaa aatacagtgg 350
 aaaggtgcct gaagatattt aaaccacgtc ttggaaattt agtgggtctt 400
 ggctttggga taggtgaagt gaggacagac actggagagg agggaaaggg 450
 gacgttttca ataggaggca aaactcgagg gtgggatcca ctgaggagta 500
 cataggctgc tggatctggt ggagccagca ctgggcccac ggggtggaac 550
 tggctgctgt ggaggggggt acgtgagggg ggggtctggg gcttatcctc 600
 aggtcctgtg ggtggggcag cgagtcgggg cctgagcgtc aagagcatgc 650
 cctagtgagc gggctcctct gggggagccc agcgcgctcc gggcgctgc 700
 cggtttgggg gtgtctcctc ccggggcgct atggcgggcg tggccagtag 750
 cctgatccgg cagaagcggg aggtccgcga gcccgggggc agccggccgg 800
 tgtcggcgca gcggcgctg tgtccccg cgaccaagtc ctttgccag 850
 aagcagctcc tcatcctgct gtccaagggt cgactgtgcg gggggcggcc 900
 cgcgcgccg gaccgcggcc cggagcctca gctcaaaggc atcgtcacca 950
 aactgttctg ccgccagggt ttctacctcc aggcgaatcc cgacggaagc 1000
 atccagggca cccagagga taccagctcc ttcacccact tcaacctgat 1050
 ccctgtgggc ctccgtgtgg tcaccatcca gagcgccaag ctgggtcact 1100
 acatggccat gaatgctgag ggactgctct acagttcgcc gcatttcaca 1150
 gctgagtgtc gctttaagga gtgtgtcttt gagaattact acgtcctgta 1200
 cgcctctgct ctctaccgcc agcgtcgttc tggccggggc tggtagctcg 1250

gcctggacaa ggagggccag gtcataaagg gaaaccgagt taagaagacc 1300
aaggcagctg cccactttct gcccaagctc ctggaggtgg ccatgtacca 1350
ggagccttct ctccacagtg tccccgaggc ctccccttcc agtccccctg 1400
ccccctgaaa tgtagtccct ggactggagg ttccctgcac tcccagttag 1450
ccagccacca ccacaacctg t 1471

<210> 497
<211> 225
<212> PRT
<213> Homo Sapien

<400> 497
Met Ala Ala Leu Ala Ser Ser Leu Ile Arg Gln Lys Arg Glu Val
1 5 10 15
Arg Glu Pro Gly Gly Ser Arg Pro Val Ser Ala Gln Arg Arg Val
20 25 30
Cys Pro Arg Gly Thr Lys Ser Leu Cys Gln Lys Gln Leu Leu Ile
35 40 45
Leu Leu Ser Lys Val Arg Leu Cys Gly Gly Arg Pro Ala Arg Pro
50 55 60
Asp Arg Gly Pro Glu Pro Gln Leu Lys Gly Ile Val Thr Lys Leu
65 70 75
Phe Cys Arg Gln Gly Phe Tyr Leu Gln Ala Asn Pro Asp Gly Ser
80 85 90
Ile Gln Gly Thr Pro Glu Asp Thr Ser Ser Phe Thr His Phe Asn
95 100 105
Leu Ile Pro Val Gly Leu Arg Val Val Thr Ile Gln Ser Ala Lys
110 115 120
Leu Gly His Tyr Met Ala Met Asn Ala Glu Gly Leu Leu Tyr Ser
125 130 135
Ser Pro His Phe Thr Ala Glu Cys Arg Phe Lys Glu Cys Val Phe
140 145 150
Glu Asn Tyr Tyr Val Leu Tyr Ala Ser Ala Leu Tyr Arg Gln Arg
155 160 165
Arg Ser Gly Arg Ala Trp Tyr Leu Gly Leu Asp Lys Glu Gly Gln
170 175 180
Val Met Lys Gly Asn Arg Val Lys Lys Thr Lys Ala Ala Ala His
185 190 195
Phe Leu Pro Lys Leu Leu Glu Val Ala Met Tyr Gln Glu Pro Ser
200 205 210
Leu His Ser Val Pro Glu Ala Ser Pro Ser Ser Pro Pro Ala Pro
215 220 225

<210> 498
<211> 744

gtgatcagtc tgaaatacaa ctgtttgaat tccagaagga ccaacaccag 800
ataaattatg aatgttgaac aagatgacct tacatccaca gcagataatg 850
ataggtccta ggtttaacag ggccctatth gacccctgc ttgtggtgct 900
gctggctctt caacttcttg tgggtggtgg tctggtgctg gctcagacct 950
gcccttctgt gtgctcctgc agcaaccagt tcagcaaggt gatttgtgtt 1000
cggaaaaacc tgcgtgaggt tccggatggc atctccacca acacacggct 1050
gctgaacctc catgagaacc aaatccagat catcaaagt aacagcttca 1100
agcacttgag gcacttgga atcctacagt tgagtaggaa ccatatcaga 1150
accattgaaa ttggggcttt caatggtctg gcgaacctca aactctgga 1200
actctttgac aatcgtctta ctaccatccc gaatggagct tttgtatact 1250
tgtctaaact gaaggagctc tgggtgcgaa acaaccccat tgaaagcatc 1300
ccttcttatg cttttaacag aattccttct ttgcgccgac tagacttagg 1350
ggaattgaaa agactttcat acatctcaga aggtgccttt gaaggtctgt 1400
ccaacttgag gtatttgaac cttgccatgt gcaaccttcg ggaaatccct 1450
aacctcacac cgctcataaa actagatgag ctggatcttt ctgggaatca 1500
tttatctgcc atcaggcctg gctctttcca gggtttgatg caccttcaaa 1550
aactgtggat gatacagtc cagattcaag tgattgaacg gaatgccttt 1600
gacaaccttc agtcactagt ggagatcaac ctggcacaca ataatctaac 1650
attactgcct catgacctct tcaactccctt gcatcatcta gagcggatac 1700
atttacatca caacccttg aactgtaact gtgacatact gtggctcagc 1750
tgggtggataa aagacatggc cccctcgaac acagcttggt gtgcccgggtg 1800
taacactcct cccaatctaa aggggaggtta cattggagag ctcgaccaga 1850
attacttcac atgctatgct ccggtgattg tggagcccc tgcagacctc 1900
aatgtcactg aaggcatggc agctgagctg aaatgtcggg cctccacatc 1950
cctgacatct gtatcttga ttactccaaa tggaaacagtc atgacacatg 2000
gggcgtacaa agtgccgata gctgtgctca gtgatggtac gttaaatttc 2050
acaaatgtaa ctgtgcaaga tacaggcatg tacacatgta tggtagtaaa 2100
ttccgttggg aatactactg cttcagccac cctgaatggt actgcagcaa 2150
ccactactcc tttctcttac ttttcaaccg tcacagtaga gactatggaa 2200
ccgtctcagg atgaggcacg gaccacagat aacaatgtgg gtcccaactcc 2250
agtggctgac tgggagacca ccaatgtgac cacctctctc acaccacaga 2300
gcacaaggtc gacagagaaa accttcacca tcccagtgac tgatataaac 2350

agtgggatcc caggaattga tgaggtcatg aagactacca aaatcatcat 2400
 tgggtgtttt gtggccatca cactcatggc tgcagtgatg ctggtcattt 2450
 tctacaagat gaggaagcag caccatcggc aaaaccatca cgccccaaca 2500
 aggactgttg aaattattaa tgtggatgat gagattacgg gagacacacc 2550
 catggaaagc cacctgcccc tgcctgctat cgagcatgag cacctaaatc 2600
 actataactc atacaaatct cccttcaacc acacaacaac agttaacaca 2650
 ataaattcaa tacacagttc agtgcataaa ccgttattga tccgaatgaa 2700
 ctctaaagac aatgtacaag agactcaaat ctaaaacatt tacagagtta 2750
 caaaaaaaca acaatcaaaa aaaaagacag tttattaaaa atgacacaaa 2800
 tgactgggct aaatctactg tttcaaaaaa gtgtctttac aaaaaaaca 2850
 aaaagaaaag aaatttattt attaaaaatt ctattgtgat ctaaagcaga 2900
 caaaaa 2906

<210> 501
 <211> 640
 <212> PRT
 <213> Homo Sapien

<400> 501
 Met Leu Asn Lys Met Thr Leu His Pro Gln Gln Ile Met Ile Gly
 1 5 10 15
 Pro Arg Phe Asn Arg Ala Leu Phe Asp Pro Leu Leu Val Val Leu
 20 25 30
 Leu Ala Leu Gln Leu Leu Val Val Ala Gly Leu Val Arg Ala Gln
 35 40 45
 Thr Cys Pro Ser Val Cys Ser Cys Ser Asn Gln Phe Ser Lys Val
 50 55 60
 Ile Cys Val Arg Lys Asn Leu Arg Glu Val Pro Asp Gly Ile Ser
 65 70 75
 Thr Asn Thr Arg Leu Leu Asn Leu His Glu Asn Gln Ile Gln Ile
 80 85 90
 Ile Lys Val Asn Ser Phe Lys His Leu Arg His Leu Glu Ile Leu
 95 100 105
 Gln Leu Ser Arg Asn His Ile Arg Thr Ile Glu Ile Gly Ala Phe
 110 115 120
 Asn Gly Leu Ala Asn Leu Asn Thr Leu Glu Leu Phe Asp Asn Arg
 125 130 135
 Leu Thr Thr Ile Pro Asn Gly Ala Phe Val Tyr Leu Ser Lys Leu
 140 145 150
 Lys Glu Leu Trp Leu Arg Asn Asn Pro Ile Glu Ser Ile Pro Ser
 155 160 165

Val	Val	Asp	Trp	Glu	Thr	Thr	Asn	Val	Thr	Thr	Ser	Leu	Thr	Pro	
				485					490					495	
Gln	Ser	Thr	Arg	Ser	Thr	Glu	Lys	Thr	Phe	Thr	Ile	Pro	Val	Thr	
				500					505					510	
Asp	Ile	Asn	Ser	Gly	Ile	Pro	Gly	Ile	Asp	Glu	Val	Met	Lys	Thr	
				515					520					525	
Thr	Lys	Ile	Ile	Ile	Gly	Cys	Phe	Val	Ala	Ile	Thr	Leu	Met	Ala	
				530					535					540	
Ala	Val	Met	Leu	Val	Ile	Phe	Tyr	Lys	Met	Arg	Lys	Gln	His	His	
				545					550					555	
Arg	Gln	Asn	His	His	Ala	Pro	Thr	Arg	Thr	Val	Glu	Ile	Ile	Asn	
				560					565					570	
Val	Asp	Asp	Glu	Ile	Thr	Gly	Asp	Thr	Pro	Met	Glu	Ser	His	Leu	
				575					580					585	
Pro	Met	Pro	Ala	Ile	Glu	His	Glu	His	Leu	Asn	His	Tyr	Asn	Ser	
				590					595					600	
Tyr	Lys	Ser	Pro	Phe	Asn	His	Thr	Thr	Thr	Val	Asn	Thr	Ile	Asn	
				605					610					615	
Ser	Ile	His	Ser	Ser	Val	His	Glu	Pro	Leu	Leu	Ile	Arg	Met	Asn	
				620					625					630	
Ser	Lys	Asp	Asn	Val	Gln	Glu	Thr	Gln	Ile						
				635					640						

<210> 502
 <211> 2458
 <212> DNA
 <213> Homo Sapien

<400> 502
 gcgcgaggag cccatctgcc ccaggggca cggggcgcg ggccgggtcc 50
 cgcccgac atggctgcag ccacctcgcg cgcacccga ggcgcccgc 100
 ccagctcgcc cgaggtccgt cggaggcgcc cgcccgccc ggagccaagc 150
 agcaactgag cggggaagcg cccgcgtccg gggatcggga tgtccctcct 200
 ccttctctc ttgctagttt cctactatgt tggaaccttg gggactcaca 250
 ctgagatcaa gagagtggca gaggaaaagg tcactttgcc ctgccaccat 300
 caactggggc ttccagaaaa agacactctg gatattgaat ggctgctcac 350
 cgataatgaa gggaaccaa aagtggatg cacttactcc agtcgtcatg 400
 tctacaataa cttgactgag gaacagaagg gccgagtggc ctttgcttcc 450
 aatttcctgg caggagatgc ctccttgag attgaacctc tgaagcccag 500
 tgatgagggc cggtacacct gtaagggtta gaattcaggg cgctacgtgt 550
 ggagccatgt catcttaaaa gtcttagtga gaccatcaa gcccaagtgt 600

gagttggaag gagagctgac agaaggaagt gacctgactt tgcagtgtga 650
 gtcattcctct ggcacagagc ccatttgtta ttactggcag cgaatccgag 700
 agaaagaggg agaggatgaa cgtctgcctc ccaaattctag gattgactac 750
 aaccaccctg gacgagttct gctgcagaat cttaccatgt cctactctgg 800
 actgtaccag tgcacagcag gcaacgaagc tgggaaggaa agctgtgtgg 850
 tgcgagtaac tgtacagtat gtacaaagca tcggcatggg tgcaggagca 900
 gtgacaggca tagtggctgg agccctgctg attttcctct tgggtgtggct 950
 gctaattcga aggaaagaca aagaaagata tgaggaagaa gagagacctt 1000
 atgaaattcg agaagatgct gaagctccaa aagcccgtct tgtgaaacct 1050
 agctcctctt cctcaggctc tcggagctca cgctctggtt ctctctccac 1100
 tcgctccaca gcaaatagtg cctcacgcag ccagcggaca ctgtcaactg 1150
 acgcagcacc ccagccaggg ctggccaccc aggcatacag cctagtgggg 1200
 ccagaggtga gaggttctga accaaagaaa gtccaccatg ctaattctgac 1250
 caaagcagaa accacacca gcatgatccc cagccagagc agagccttcc 1300
 aaacggtctg aattacaatg gacttgactc ccacgcttct ctaggagtca 1350
 gggctcttgg actcttctcg tcattggagc tcaagtcacc agccacacaa 1400
 ccagatgaga ggtcatctaa gtagcagtga gcattgcacg gaacagattc 1450
 agatgagcat tttccttata caataccaaa caagcaaaaag gatgtaagct 1500
 gattcatctg taaaaaggca tcttattgtg ccttttagacc agagtaaggg 1550
 aaagcaggag tccaaatcta tttgttgacc aggacctgtg gtgagaagg 1600
 tggggaaagg tgaggtgaat atacctaaaa cttttaatgt gggatatttt 1650
 gtatcagtgc tttgattcac aattttcaag aggaaatggg atgctgtttg 1700
 taaattttct atgcatttct gcaaacttat tggattatta gttattcaga 1750
 cagtcaagca gaaccacag ccttattaca cctgtctaca ccatgtactg 1800
 agctaaccac ttctaagaaa ctccaaaaaa ggaaacatgt gtcttctatt 1850
 ctgacttaac ttcatattgtc ataaggtttg gatattaatt tcaaggggag 1900
 ttgaaatagt gggagatgga gaagagtga tgagtctctc ccactctata 1950
 ctaattctac tatttgtatt gagcccaaaa taactatgaa aggagacaaa 2000
 aatttgtgac aaaggattgt gaagagcttt ccatcttcat gatgttatga 2050
 ggattgttga caaacattag aaatatataa tggagcaatt gtggatttcc 2100
 cctcaaatac gatgcctcta aggactttcc tgctagatat ttctggaagg 2150
 agaaaataca acatgtcatt tatcaacgtc cttagaaaga attcttctag 2200

Gln Tyr Val Gln Ser Ile Gly Met Val Ala Gly Ala Val Thr Gly	230	235	240
Ile Val Ala Gly Ala Leu Leu Ile Phe Leu Leu Val Trp Leu Leu	245	250	255
Ile Arg Arg Lys Asp Lys Glu Arg Tyr Glu Glu Glu Glu Arg Pro	260	265	270
Asn Glu Ile Arg Glu Asp Ala Glu Ala Pro Lys Ala Arg Leu Val	275	280	285
Lys Pro Ser Ser Ser Ser Ser Gly Ser Arg Ser Ser Arg Ser Gly	290	295	300
Ser Ser Ser Thr Arg Ser Thr Ala Asn Ser Ala Ser Arg Ser Gln	305	310	315
Arg Thr Leu Ser Thr Asp Ala Ala Pro Gln Pro Gly Leu Ala Thr	320	325	330
Gln Ala Tyr Ser Leu Val Gly Pro Glu Val Arg Gly Ser Glu Pro	335	340	345
Lys Lys Val His His Ala Asn Leu Thr Lys Ala Glu Thr Thr Pro	350	355	360
Ser Met Ile Pro Ser Gln Ser Arg Ala Phe Gln Thr Val	365	370	

<210> 504
 <211> 3060
 <212> DNA
 <213> Homo Sapien

<400> 504
 cgcgaggcgc ggggagcctg ggaccaggag cgagagccgc ctacctgcag 50
 ccgccgccca cggcacggca gccaccatgg cgctcctgct gtgcttcgtg 100
 ctctgtgcg gagtagtgga tttcgccaga agtttgagta tcactactcc 150
 tgaagagatg attgaaaaag ccaaagggga aactgcctat ctgccatgca 200
 aatttacgct tagtcccgaa gaccagggac cgctggacat cgagtggctg 250
 atatcaccag ctgataatca gaaggtggat caagtgatta ttttatattc 300
 tggagacaaa atttatgatg actactatcc agatctgaaa ggccgagtac 350
 attttacgag taatgatctc aaatctggtg atgcatcaat aaatgtaacg 400
 aatttacaac tgtcagatat tggcacatat cagtgc aaag tgaaaaaagc 450
 tcctggtggt gcaaataaga agattcatct ggtagttctt gttaagcctt 500
 caggtgagat atgttacgtt gatggatctg aagaaattgg aagtgacttt 550
 aagataaaat gtgaacacaa agaaggttca cttccattac agtatgagtg 600
 gcaaaaattg tctgactcac agaaaatgcc cacttcatgg ttagcagaaa 650
 tgacttcac tggtatatct gtaaaaaatg cctcttctga gtactctggg 700

acatacagct gtacagtcag aaacagagtg ggctctgac agtgcctgtt 750
gcgtctaaac gttgtccctc cttcaaataa agctggacta attgcaggag 800
ccattatagg aacttttgctt gctctagcgc tcattgggtct tatcatcttt 850
tgctgtcgta aaaagcgcag agaagaaaaa tatgaaaagg aagttcatca 900
cgatatcagg gaagatgtgc cacctccaaa gagccgtacg tccactgcca 950
gaagctacat cggcagtaat cattcatccc tgggggtccat gtctccttcc 1000
aacatggaag gatattccaa gactcagtat aaccaagtac caagtgaaga 1050
ctttgaacgc actcctcaga gtccgactct cccacctgct aagttcaagt 1100
acccttaciaa gactgatgga attacagttg tataaatatg gactactgaa 1150
gaatctgaag tattgtatta tttgacttta ttttaggcct ctagtaaaga 1200
cttaaatgtt ttttaaaaaa agcacaaggc acagagatta gagcagctgt 1250
aagaacacat ctactttatg caatggcatt agacatgtaa gtcagatgtc 1300
atgtcaaaat tagtacgagc caaattcttt gttaaaaaac cctatgtata 1350
gtgacactga tagttaaag atgttttatt atattttcaa taactaccac 1400
taacaaatth ttaacttttc atatgcatat tctgatatgt ggtcttttag 1450
gaaaagtatg gttaatagtt gatttttcaa aggaaattht aaaattctta 1500
cgttctgttt aatgtttttg ctatttagtt aaatacattg aagggaata 1550
ccggttcttt tcccctttta tgcacacaac agaaacacgc gttgtcatgc 1600
ctcaaaactat tttttatttg caactacatg atttcacaca attctcttaa 1650
acaacgacat aaaatagatt tccttgata taaataactt acatacgctc 1700
cataaagtaa atttctcaaag gtgctagaac aaatcgtcca cttctacagt 1750
gttctcgtat ccaacagagt tgatgcacaa tatataaata ctcaagtcca 1800
atattaaaaa cttaggcact tgactaactt taataaaatt tctcaacta 1850
tatcaatatc taaagtgcac atatttttta agaaagatta ttctcaataa 1900
cttctataaa aataagtttg atggtttggc ccatctaact tcactactat 1950
tagtaagaac ttttaacttt taatgtgtag taaggtttat tctacctttt 2000
tctcaacatg acaccaacac aatcaaaaac gaagttagtg aggtgctaac 2050
atgtgaggat taatccagtg attccggta caatgcattc caggaggagg 2100
taccatgtc actggaattg ggcgatatgg tttatttttt cttccctgat 2150
ttggataacc aaatggaaca ggaggaggat agtgattctg atggccattc 2200
cctcgataca ttcttggtt ttttctgggc aaagggtgcc acattggaag 2250
aggtggaat ataagttctg aaatctgtag ggaagagaac acattaagtt 2300

aattcaaagg aaaaaatcat catctatggt ccagatttct cattaaagac 2350
aaagttaccc acaacactga gatcacatct aagtgacact cctattgtca 2400
gggtctaaata cattaataaac ctcatgtgta ataggcgtat aatgtataac 2450
aggtgaccaa tgttttctga atgcataaag aaatgaataa actcaaacac 2500
agtacttcct aaacaacttc aaccaaaaaa gaccaaaaca tggaacgaat 2550
ggaagcttgt aaggacatgc ttgttttagt ccagtgggtt ccacagctgg 2600
ctaagccagg agtcacttgg aggcttttaa atacaaaaca ttggagctgg 2650
aggccattat ccttagcaaa ctaatgcaga aacagaaaat caactaccgc 2700
atgttctcac ttataagtgg gaggtaatga taagaactta tgaacacaaa 2750
gaaggaaaca atagacattg gagtctattt gagaggggag ggtgggagaa 2800
ggaaaaggag cagaaaagat aactattgag tactgccttc acacctgggt 2850
gatgaaataa tatgtacaac aaatccctgt gacacatggt tacctatgga 2900
acaaaccttc atgtgtatcc ctaaacctaa aataaaagt aaataaaaaa 2950
aaataaaaaa aataaaaaaa aataaaaaaa aataaaaaaa aataaaaaaa 3000
aaataaaaaa aataaaaaaa aataaaaaaa aataaaaaaa aataaaaaaa 3050
aaataaaaaa 3060

<210> 505
<211> 352
<212> PRT
<213> Homo Sapien

<400> 505
Met Ala Leu Leu Leu Cys Phe Val Leu Leu Cys Gly Val Val Asp
1 5 10 15
Phe Ala Arg Ser Leu Ser Ile Thr Thr Pro Glu Glu Met Ile Glu
20 25 30
Lys Ala Lys Gly Glu Thr Ala Tyr Leu Pro Cys Lys Phe Thr Leu
35 40 45
Ser Pro Glu Asp Gln Gly Pro Leu Asp Ile Glu Trp Leu Ile Ser
50 55 60
Pro Ala Asp Asn Gln Lys Val Asp Gln Val Ile Ile Leu Tyr Ser
65 70 75
Gly Asp Lys Ile Tyr Asp Asp Tyr Tyr Pro Asp Leu Lys Gly Arg
80 85 90
Val His Phe Thr Ser Asn Asp Leu Lys Ser Gly Asp Ala Ser Ile
95 100 105
Asn Val Thr Asn Leu Gln Leu Ser Asp Ile Gly Thr Tyr Gln Cys
110 115 120
Lys Val Lys Lys Ala Pro Gly Val Ala Asn Lys Lys Ile His Leu


```

agatgaatTT tcaacagagg ctgcaaagcc tgtggactTT agccagaccc 300
ttctgccctc ctttTgtggc gacagcctct caaatgcaga tggTtTgtgct 350
ccctTgcctg ggtttttaccc Tgtttctctg gagccaggta tcagggggccc 400
agggccaaga attccactTT gggccctgcc aagtgaaggg ggtTgttccc 450
cagaaactgt gggaagcctt ctgggctgtg aaagacacta tgcaagctca 500
ggataacatc acgagtggcc ggctgctgca gcaggaggTt ctgcagaacg 550
tctcggatgc tgagagctgt tacctTgtcc acaccctgct ggagTtctac 600
ttgaaaactg ttttcaaaaa ccaccacaat agaacagTtg aagtcaggac 650
tctgaagtca ttctctactc Tggccaacaa cttTgttctc atcgtgtcac 700
aactgcaacc cagtcaagaa aatgagatgt tttccatcag agacagtgca 750
cacaggcggt ttctgctatt ccggagagca ttcaaacagt Tggacgtaga 800
agcagctctg accaaaagccc ttgggggaagt ggacattctt ctgacctgga 850
Tgcagaaatt ctacaagctc Tgaatgtcta gaccaggacc tccctccccc 900
Tggcactggt ttgttccctg Tgtcatttca aacagtctcc cttcctatgc 950
TgttTactgg acacttcacg ccctTggcca Tgggtcccat tctTggccca 1000
ggattattgt caaagaagtc attctTTaag cagcgccagt gacagtCagg 1050
gaaggtgcct ctggatgctg Tgaagagtct acagagaaga ttctTgtatt 1100
tattacaact ctattttaatt aatgtcagta tttcaactga agTtctattt 1150
attTgtgaga ctgtaagtta catgaaggca gcagaatatt gtgccccatg 1200
cttctttacc cctcacaatc cttgccacag Tgtggggcag Tggatgggtg 1250
cttagtaagt acttaataaa ctgtggTgct tttttTggcc TgtctttTga 1300
ttgttaaaaa acagagaggg atgctTggat gtaaaactga acttcagagc 1350
atgaaaatca cactgtcttc Tgatatctgc agggacagag cattggggTg 1400
ggggtaaggt gcatctgttt gaaaagtaaa cgataaaatg Tggattaaag 1450
tgcccagcac aaagcagatc ctcaataaac atttcatttc ccaccacac 1500
tcgccagctc accccatcat ccctttccct Tggtgccctc cttttttttt 1550
tatcctagtc attcttccct aatcttcac ttgagtgtca agctgacctt 1600
gctgatggTg acattgcacc Tggatgtact atccaatctg Tgatgacatt 1650
ccctgctaatt aaaagacaac ataactccaa aaaaaaaaaa aaaaaaaaaa 1700
aaaaa 1705

```

<210> 507
 <211> 206
 <212> PRT

<213> Homo Sapien

<400> 507

Met Asn Phe Gln Gln Arg Leu Gln Ser Leu Trp Thr Leu Ala Arg
1 5 10 15
Pro Phe Cys Pro Pro Leu Leu Ala Thr Ala Ser Gln Met Gln Met
20 25 30
Val Val Leu Pro Cys Leu Gly Phe Thr Leu Leu Leu Trp Ser Gln
35 40 45
Val Ser Gly Ala Gln Gly Gln Glu Phe His Phe Gly Pro Cys Gln
50 55 60
Val Lys Gly Val Val Pro Gln Lys Leu Trp Glu Ala Phe Trp Ala
65 70 75
Val Lys Asp Thr Met Gln Ala Gln Asp Asn Ile Thr Ser Ala Arg
80 85 90
Leu Leu Gln Gln Glu Val Leu Gln Asn Val Ser Asp Ala Glu Ser
95 100 105
Cys Tyr Leu Val His Thr Leu Leu Glu Phe Tyr Leu Lys Thr Val
110 115 120
Phe Lys Asn His His Asn Arg Thr Val Glu Val Arg Thr Leu Lys
125 130 135
Ser Phe Ser Thr Leu Ala Asn Asn Phe Val Leu Ile Val Ser Gln
140 145 150
Leu Gln Pro Ser Gln Glu Asn Glu Met Phe Ser Ile Arg Asp Ser
155 160 165
Ala His Arg Arg Phe Leu Leu Phe Arg Arg Ala Phe Lys Gln Leu
170 175 180
Asp Val Glu Ala Ala Leu Thr Lys Ala Leu Gly Glu Val Asp Ile
185 190 195
Leu Leu Thr Trp Met Gln Lys Phe Tyr Lys Leu
200 205

<210> 508

<211> 924

<212> DNA

<213> Homo Sapien

<400> 508

aaggagcagc ccgcaagcac caagtgagag gcatgaagtt acagtgtggt 50
tccctttggc tcttggtac aatactgata ttgtgctcag tagacaacca 100
cgggtctcagg agatgtctga tttccacaga catgcaccat atagaagaga 150
gtttccaaga aatcaaaaaga gccatccaag ctaaggacac cttoccaaatt 200
gtcactatcc tgtccacatt ggagactctg cagatcatta agcccttaga 250
tgtgtgctgc gtgaccaaga acctcctggc gttctacgtg gacaggggtg 300

tcaaggatca tcaggagcca aacccccaaaa tcttgagaaa aatcagcagc 350
 attgccaaact ctttcctcta catgcagaaa actctgcggc aatgtcagga 400
 acagaggcag tgtcactgca ggcaggaagc caccaatgcc accagagtca 450
 tccatgacaa ctatgatcag ctggagggtcc acgctgctgc cattaaatcc 500
 ctgggagagc tcgacgtctt tctagcctgg attaataaga atcatgaagt 550
 aatgtttctca gcttgatgac aaggaacctg tatagtgatc cagggatgaa 600
 caccctctgt gcggtttact gtgggagaca gccaccttg aaggggaagg 650
 agatggggaa ggcccttgc agctgaaagt cccactggct ggcctcaggc 700
 tgtcttattc cgcttgaaaa taggcaaaaa gtctactgtg gtatttgtaa 750
 taaactctat ctgctgaaag ggcctgcagg ccatcctggg agtaaagggc 800
 tgccttccca tctaatttat tgtaaagtca tatagtccat gtctgtgatg 850
 tgagccaagt gatatcctgt agtacacatt gtactgagtg gtttttctga 900
 ataaattcca tattttacct atga 924

<210> 509
 <211> 177
 <212> PRT
 <213> Homo Sapien

<400> 509
 Met Lys Leu Gln Cys Val Ser Leu Trp Leu Leu Gly Thr Ile Leu
 1 5 10 15
 Ile Leu Cys Ser Val Asp Asn His Gly Leu Arg Arg Cys Leu Ile
 20 25 30
 Ser Thr Asp Met His His Ile Glu Glu Ser Phe Gln Glu Ile Lys
 35 40 45
 Arg Ala Ile Gln Ala Lys Asp Thr Phe Pro Asn Val Thr Ile Leu
 50 55 60
 Ser Thr Leu Glu Thr Leu Gln Ile Ile Lys Pro Leu Asp Val Cys
 65 70 75
 Cys Val Thr Lys Asn Leu Leu Ala Phe Tyr Val Asp Arg Val Phe
 80 85 90
 Lys Asp His Gln Glu Pro Asn Pro Lys Ile Leu Arg Lys Ile Ser
 95 100 105
 Ser Ile Ala Asn Ser Phe Leu Tyr Met Gln Lys Thr Leu Arg Gln
 110 115 120
 Cys Gln Glu Gln Arg Gln Cys His Cys Arg Gln Glu Ala Thr Asn
 125 130 135
 Ala Thr Arg Val Ile His Asp Asn Tyr Asp Gln Leu Glu Val His
 140 145 150
 Ala Ala Ala Ile Lys Ser Leu Gly Glu Leu Asp Val Phe Leu Ala

155 160 165
 Trp Ile Asn Lys Asn His Glu Val Met Phe Ser Ala
 170 175

<210> 510
 <211> 996
 <212> DNA
 <213> Homo Sapien

<400> 510
 cccgtgccaa gagtgacgta agtaccgcct atagagtcta taggcccact 50
 tggcttcggtt agaacgcggc tacaattaat acataacctt atgtatcata 100
 cacatacgat ttaggtgaca ctatagaata acatccactt tgcctttctc 150
 tccacagggtg tccactccca ggtccaactg cacctcggtt ctatcgataa 200
 tctcagcacc agccactcag agcagggcac gatgttgggg gcccgccctca 250
 ggctctgggt ctgtgccttg tgcagcgtct gcagcatgag cgtcctcaga 300
 gcctatccca atgcctcccc actgctcggc tccagctggg gtggcctgat 350
 ccacctgtac acagccacag ccaggaacag ctaccacctg cagatccaca 400
 agaatggcca tgtggatggc gcaccccatc agaccatcta cagtgccctg 450
 atgatcagat cagaggatgc tggctttgtg gtgattacag gtgtgatgag 500
 cagaagatac ctctgcatgg atttcagagg caacattttt ggatcacact 550
 atttcgaccc ggagaactgc aggttccaac accagacgct ggaaaacggg 600
 tacgacgtct accactctcc tcagtatcac ttcttggtca gtctggggccg 650
 ggccaagaga gccttcctgc caggcatgaa cccacccccg tactcccagt 700
 tcctgtcccc gaggaacgag atccccctaa ttcacttcaa ccccccata 750
 ccacggcggc acacccggag cgccgaggac gactcggagc gggaccccct 800
 gaacgtgctg aagccccggg cccggatgac cccggccccg gcctcctggt 850
 cacaggagct cccgagcgcc gaggacaaca gccogatggc cagtgaacca 900
 ttaggggtgg tcaggggcgg tcgagtgaac acgcacgctg ggggaacggg 950
 cccggaaggc tgccgcccct tcgccaagtt catctagggt cgctgg 996

<210> 511
 <211> 251
 <212> PRT
 <213> Homo Sapien

<400> 511
 Met Leu Gly Ala Arg Leu Arg Leu Trp Val Cys Ala Leu Cys Ser
 1 5 10 15
 Val Cys Ser Met Ser Val Leu Arg Ala Tyr Pro Asn Ala Ser Pro
 20 25 30

Leu	Leu	Gly	Ser	Ser	Trp	Gly	Gly	Leu	Ile	His	Leu	Tyr	Thr	Ala	
				35					40					45	
Thr	Ala	Arg	Asn	Ser	Tyr	His	Leu	Gln	Ile	His	Lys	Asn	Gly	His	
				50					55					60	
Val	Asp	Gly	Ala	Pro	His	Gln	Thr	Ile	Tyr	Ser	Ala	Leu	Met	Ile	
				65					70					75	
Arg	Ser	Glu	Asp	Ala	Gly	Phe	Val	Val	Ile	Thr	Gly	Val	Met	Ser	
				80					85					90	
Arg	Arg	Tyr	Leu	Cys	Met	Asp	Phe	Arg	Gly	Asn	Ile	Phe	Gly	Ser	
				95					100					105	
His	Tyr	Phe	Asp	Pro	Glu	Asn	Cys	Arg	Phe	Gln	His	Gln	Thr	Leu	
				110					115					120	
Glu	Asn	Gly	Tyr	Asp	Val	Tyr	His	Ser	Pro	Gln	Tyr	His	Phe	Leu	
				125					130					135	
Val	Ser	Leu	Gly	Arg	Ala	Lys	Arg	Ala	Phe	Leu	Pro	Gly	Met	Asn	
				140					145					150	
Pro	Pro	Pro	Tyr	Ser	Gln	Phe	Leu	Ser	Arg	Arg	Asn	Glu	Ile	Pro	
				155					160					165	
Leu	Ile	His	Phe	Asn	Thr	Pro	Ile	Pro	Arg	Arg	His	Thr	Arg	Ser	
				170					175					180	
Ala	Glu	Asp	Asp	Ser	Glu	Arg	Asp	Pro	Leu	Asn	Val	Leu	Lys	Pro	
				185					190					195	
Arg	Ala	Arg	Met	Thr	Pro	Ala	Pro	Ala	Ser	Cys	Ser	Gln	Glu	Leu	
				200					205					210	
Pro	Ser	Ala	Glu	Asp	Asn	Ser	Pro	Met	Ala	Ser	Asp	Pro	Leu	Gly	
				215					220					225	
Val	Val	Arg	Gly	Gly	Arg	Val	Asn	Thr	His	Ala	Gly	Gly	Thr	Gly	
				230					235					240	
Pro	Glu	Gly	Cys	Arg	Pro	Phe	Ala	Lys	Phe	Ile					
				245					250						

<210> 512
 <211> 2015
 <212> DNA
 <213> Homo Sapien

<400> 512
 ggaaaaggta cccgcgagag acagccagca gttctgtgga gcagcggtgg 50
 ccggctagga tgggctgtct ctggggtctg gctctgcccc ttttcttctt 100
 ctgctgggag gttggggtct ctgggagctc tgcaggcccc agcaccgcga 150
 gagcagacac tgcatgaca acggacgaca cagaagtgcc cgctatgact 200
 ctagcaccgg gccacgccgc tctggaaact caaacgctga gcgctgagac 250
 ctcttctagg gcctcaacct cagccggccc cattccagaa gcagagacca 300

ggggagccaa gagaatttcc cctgcaagag agaccaggag tttcacaaaa 350
 acatctccca acttcatggt gctgatcgcc acctccgtgg agacatcagc 400
 cgccagtggc agccccgagg gagctggaat gaccacagtt cagaccatca 450
 caggcagtga tcccaggagg gccatctttg acaccctttg caccgatgac 500
 agctctgaag aggcaaagac actcacaatg gacatattga cattgggtca 550
 cacctccaca gaagctaagg gcctgtcctc agagagcagt gcctcttccg 600
 acggccccca tccagtcac acccgcgcac gggcctcaga gagcagcgcc 650
 tcttccgacg gcccccatcc agtcacaccc ccgtcacggg cctcagagag 700
 cagcgcctct tccgacggcc cccatccagt catcaccccg tcatgggtcc 750
 cgggatctga tgtcactctc ctgcgtgaag ccctgggtgac tgtcaciaaac 800
 atcgagggtta ttaattgcag catcacagaa atagaaacaa caacttccag 850
 catccctggg gcctcagaca tagatctcat cccacaggaa ggggtgaagg 900
 cctcgtccac ctccgatcca ccagctctgc ctgactccac tgaagcaaaa 950
 ccacacatca ctgaggtcac agcctctgcc gagaccctgt ccacagccgg 1000
 caccacagag tcagctgcac ctcatgccac ggttgggacc ccaactccca 1050
 ctaacagcgc cacagaaaga gaagtgcag caccgggggc caagaccctc 1100
 agtggagctc tggtcacagt tagcaggaat cccctggaag aaacctcagc 1150
 cctctctgtt gagacaccaa gttacgtcaa agtctcagga gcagctccgg 1200
 tctccataga ggctgggtca gcagtgggca aaacaacttc ctttgctggg 1250
 agctctgctt cctcctacag cccctcgga gcccgcctca agaacttcac 1300
 cccttcagag acaccgacca tggacatcgc aaccaagggg cccttcccca 1350
 ccagcaggga ccctcttctt tctgtccctc cgactacaac caacagcagc 1400
 cgagggacga acagcacctt agccaagatc acaacctcag cgaagaccac 1450
 gatgaagccc caacagccac gccacgact gcccgacga ggccgaccac 1500
 agacgtgagt gcaggtgaaa atggagggtt cctcctcctg cggctgagtg 1550
 tggcttcccc ggaagacctc actgaccca gagtggcaga aaggctgatg 1600
 cagcagctcc accgggaact ccacgccac gcgcctcact tccaggtctc 1650
 cttactgcgt gtcaggagag gctaacggac atcagctgca gccaggcatg 1700
 tcccgtatgc caaaagaggg tgctgccct agcctgggccc cccaccgaca 1750
 gactgcagct gcgttactgt gctgagaggt acccagaagg tttccatgaa 1800
 gggcagcatg tccaagcccc taaccccaga tgtggcaaca ggaccctcgc 1850
 tcacatccac cggagtgtat gtatggggag gggcttcacc tgttcccaga 1900

gggtgccttg gactcacctt ggcacatgtt ctgtgtttca gtaaagagag 1950
 acctgatcac ccactctgtgt gcttccatcc tgcattaaaa ttcactcagt 2000
 gtggcccaaa aaaaa 2015

<210> 513
 <211> 482
 <212> PRT
 <213> Homo Sapien

<400> 513
 Met Gly Cys Leu Trp Gly Leu Ala Leu Pro Leu Phe Phe Phe Cys
 1 5 10 15
 Trp Glu Val Gly Val Ser Gly Ser Ser Ala Gly Pro Ser Thr Arg
 20 25 30
 Arg Ala Asp Thr Ala Met Thr Thr Asp Asp Thr Glu Val Pro Ala
 35 40 45
 Met Thr Leu Ala Pro Gly His Ala Ala Leu Glu Thr Gln Thr Leu
 50 55 60
 Ser Ala Glu Thr Ser Ser Arg Ala Ser Thr Pro Ala Gly Pro Ile
 65 70 75
 Pro Glu Ala Glu Thr Arg Gly Ala Lys Arg Ile Ser Pro Ala Arg
 80 85 90
 Glu Thr Arg Ser Phe Thr Lys Thr Ser Pro Asn Phe Met Val Leu
 95 100 105
 Ile Ala Thr Ser Val Glu Thr Ser Ala Ala Ser Gly Ser Pro Glu
 110 115 120
 Gly Ala Gly Met Thr Thr Val Gln Thr Ile Thr Gly Ser Asp Pro
 125 130 135
 Glu Glu Ala Ile Phe Asp Thr Leu Cys Thr Asp Asp Ser Ser Glu
 140 145 150
 Glu Ala Lys Thr Leu Thr Met Asp Ile Leu Thr Leu Ala His Thr
 155 160 165
 Ser Thr Glu Ala Lys Gly Leu Ser Ser Glu Ser Ser Ala Ser Ser
 170 175 180
 Asp Gly Pro His Pro Val Ile Thr Pro Ser Arg Ala Ser Glu Ser
 185 190 195
 Ser Ala Ser Ser Asp Gly Pro His Pro Val Ile Thr Pro Ser Arg
 200 205 210
 Ala Ser Glu Ser Ser Ala Ser Ser Asp Gly Pro His Pro Val Ile
 215 220 225
 Thr Pro Ser Trp Ser Pro Gly Ser Asp Val Thr Leu Leu Ala Glu
 230 235 240
 Ala Leu Val Thr Val Thr Asn Ile Glu Val Ile Asn Cys Ser Ile
 245 250 255

Thr	Glu	Ile	Glu	Thr	Thr	Thr	Ser	Ser	Ile	Pro	Gly	Ala	Ser	Asp	
				260					265					270	
Ile	Asp	Leu	Ile	Pro	Thr	Glu	Gly	Val	Lys	Ala	Ser	Ser	Thr	Ser	
				275					280					285	
Asp	Pro	Pro	Ala	Leu	Pro	Asp	Ser	Thr	Glu	Ala	Lys	Pro	His	Ile	
				290					295					300	
Thr	Glu	Val	Thr	Ala	Ser	Ala	Glu	Thr	Leu	Ser	Thr	Ala	Gly	Thr	
				305					310					315	
Thr	Glu	Ser	Ala	Ala	Pro	His	Ala	Thr	Val	Gly	Thr	Pro	Leu	Pro	
				320					325					330	
Thr	Asn	Ser	Ala	Thr	Glu	Arg	Glu	Val	Thr	Ala	Pro	Gly	Ala	Thr	
				335					340					345	
Thr	Leu	Ser	Gly	Ala	Leu	Val	Thr	Val	Ser	Arg	Asn	Pro	Leu	Glu	
				350					355					360	
Glu	Thr	Ser	Ala	Leu	Ser	Val	Glu	Thr	Pro	Ser	Tyr	Val	Lys	Val	
				365					370					375	
Ser	Gly	Ala	Ala	Pro	Val	Ser	Ile	Glu	Ala	Gly	Ser	Ala	Val	Gly	
				380					385					390	
Lys	Thr	Thr	Ser	Phe	Ala	Gly	Ser	Ser	Ala	Ser	Ser	Tyr	Ser	Pro	
				395					400					405	
Ser	Glu	Ala	Ala	Leu	Lys	Asn	Phe	Thr	Pro	Ser	Glu	Thr	Pro	Thr	
				410					415					420	
Met	Asp	Ile	Ala	Thr	Lys	Gly	Pro	Phe	Pro	Thr	Ser	Arg	Asp	Pro	
				425					430					435	
Leu	Pro	Ser	Val	Pro	Pro	Thr	Thr	Thr	Asn	Ser	Ser	Arg	Gly	Thr	
				440					445					450	
Asn	Ser	Thr	Leu	Ala	Lys	Ile	Thr	Thr	Ser	Ala	Lys	Thr	Thr	Met	
				455					460					465	
Lys	Pro	Gln	Gln	Pro	Arg	Pro	Arg	Leu	Pro	Gly	Arg	Gly	Arg	Pro	
				470					475					480	

Gln Thr

<210> 514
 <211> 2284
 <212> DNA
 <213> Homo Sapien

<400> 514
 gcggagcatc cgctgcggtc ctcgccgaga ccccgcgcg gattcgccgg 50
 tccttcccgc gggcgcgaca gagctgtcct cgcacctgga tggcagcagg 100
 ggcgcggggg tcctctcgac gccagagaga aatctcatca tctgtgcagc 150
 cttcttaaag caaactaaga ccagaggagg gattatcctt gacctttgaa 200
 gacccaaaact aaactgaaat ttaaaatggt cttcggggga gaaggagct 250

tgacttacac tttggaata atttgcttcc tgacactaag gctgtctgct 300
 agtcagaatt gcctcaaaaa gagtctagaa gatgttgta ttgacatcca 350
 gtcattctctt tctaaggga ttagaggcaa tgagcccgtata tatacttcaa 400
 ctcaagaaga ctgcattaat tcttgctgtt caacaaaaaa catatcaggg 450
 gacaaagcat gtaacttgat gatcttcgac actcgaaaaa cagctagaca 500
 acccaactgc tacctatattt tctgtcccaa cgaggaagcc tgtccattga 550
 aaccagcaaa aggacttatg agttacagga taattacaga ttttccatct 600
 ttgaccagaa atttgccaag ccaagagtta cccaggaag attctctctt 650
 acatggccaa ttttcacaag cagtcactcc cctagcccat catcacacag 700
 attattcaaa gccaccgat atctcatgga gagacacact ttctcagaag 750
 tttggatcct cagatcacct ggagaaacta ttttaagatgg atgaagcaag 800
 tgcccagctc cttgcttata aggaaaaagg ccattctcag agttcacaat 850
 tttctctga tcaagaaata gtcattctgc tgccgaaaaa tgtgagtgcg 900
 ctcccagcta cgggtggcagt tgcttctcca cataccacct cggctactcc 950
 aaagcccgcc accctttctac ccaccaatgc ttcagtgaac ccttctggga 1000
 cttccagcc acagctggcc accacagctc cacctgtaac cactgtcact 1050
 tctcagcctc ccacgacct catttctaca gtttttacac gggctgcggc 1100
 tacactccaa gcaatggcta caacagcagt tctgactacc acctttcagg 1150
 cacctacgga ctogaaaggc agcttagaaa ccataccgtt tacagaaatc 1200
 tccaacttaa ctttgaacac agggaatgtg tataacccta ctgcactttc 1250
 tatgtcaaat gtggagtctt ccactatgaa taaaactgct tcctgggaag 1300
 gtaggaggc cagtccaggc agttcctccc agggcagtggt tccagaaaat 1350
 cagtacggcc ttccatttga aaaatggctt cttatcgggt ccctgctctt 1400
 tgggtgtcctg ttctgtgtga taggcctcgt cctcctgggt agaatccttt 1450
 cggaatcact ccgcaggaaa cggtactcaa gactggatta tttgatcaat 1500
 gggatctatg tggacatcta aggatggaac tcgggtgtctc ttaattcatt 1550
 tagtaaccag aagcccaaat gcaatgagtt totgtgtact tgctagtctt 1600
 agcaggaggt tgtattttga agacaggaaa atgccccctt ctgctttcct 1650
 tttttttttt ggagacagag tcttgctctg ttgcccaggc tggagtgcag 1700
 tagcacgac tcggctctca ccgcaacctc cgtctcctgg gttcaagcga 1750
 ttctcctgcc tcagcctcct aagtatctgg gattacaggc atgtgccacc 1800
 acacctgggt gatTTTTTgta ttttttagtag agacgggggt tcaccatggt 1850

Leu	Ala	Tyr	Lys	Glu	Lys	Gly	His	Ser	Gln	Ser	Ser	Gln	Phe	Ser	
				200					205					210	
Ser	Asp	Gln	Glu	Ile	Ala	His	Leu	Leu	Pro	Glu	Asn	Val	Ser	Ala	
				215					220					225	
Leu	Pro	Ala	Thr	Val	Ala	Val	Ala	Ser	Pro	His	Thr	Thr	Ser	Ala	
				230					235					240	
Thr	Pro	Lys	Pro	Ala	Thr	Leu	Leu	Pro	Thr	Asn	Ala	Ser	Val	Thr	
				245					250					255	
Pro	Ser	Gly	Thr	Ser	Gln	Pro	Gln	Leu	Ala	Thr	Thr	Ala	Pro	Pro	
				260					265					270	
Val	Thr	Thr	Val	Thr	Ser	Gln	Pro	Pro	Thr	Thr	Leu	Ile	Ser	Thr	
				275					280					285	
Val	Phe	Thr	Arg	Ala	Ala	Ala	Thr	Leu	Gln	Ala	Met	Ala	Thr	Thr	
				290					295					300	
Ala	Val	Leu	Thr	Thr	Thr	Phe	Gln	Ala	Pro	Thr	Asp	Ser	Lys	Gly	
				305					310					315	
Ser	Leu	Glu	Thr	Ile	Pro	Phe	Thr	Glu	Ile	Ser	Asn	Leu	Thr	Leu	
				320					325					330	
Asn	Thr	Gly	Asn	Val	Tyr	Asn	Pro	Thr	Ala	Leu	Ser	Met	Ser	Asn	
				335					340					345	
Val	Glu	Ser	Ser	Thr	Met	Asn	Lys	Thr	Ala	Ser	Trp	Glu	Gly	Arg	
				350					355					360	
Glu	Ala	Ser	Pro	Gly	Ser	Ser	Ser	Gln	Gly	Ser	Val	Pro	Glu	Asn	
				365					370					375	
Gln	Tyr	Gly	Leu	Pro	Phe	Glu	Lys	Trp	Leu	Leu	Ile	Gly	Ser	Leu	
				380					385					390	
Leu	Phe	Gly	Val	Leu	Phe	Leu	Val	Ile	Gly	Leu	Val	Leu	Leu	Gly	
				395					400					405	
Arg	Ile	Leu	Ser	Glu	Ser	Leu	Arg	Arg	Lys	Arg	Tyr	Ser	Arg	Leu	
				410					415					420	
Asp	Tyr	Leu	Ile	Asn	Gly	Ile	Tyr	Val	Asp	Ile					
				425					430						

<210> 516
 <211> 2749
 <212> DNA
 <213> Homo Sapien

<220>
 <221> unsure
 <222> 1869, 1887
 <223> unknown base

<400> 516
 ctcccacggt gtccagcgcc cagaatgcgg cttctgtgcc tgctatgggg 50
 ttgcctgctg ctcccaggtt atgaagccct ggagggccca gaggaatatca 100

gcggggttcga aggggacact gtgtccctgc agtgcaccta cagggaagag 150
 ctgaggggacc accggaagta ctggtgcagg aagggtggga tcctcttctc 200
 tcgctgctctt ggcaccatct atgcagaaga agaaggccag gagacaatga 250
 agggcaggggt gtccatccgt gacagccgcc aggagctctc gtcattgtg 300
 accctgtgga acctcaccct gcaagacgct ggggagtact ggtgtgggg 350
 cgaaaaacgg ggccccgatg agtctttact gatctctctg ttctgtcttc 400
 caggaccctg ctgtctctcc tccccttctc ccaccttcca gcctctggct 450
 acaacacgcc tgcagcccaa ggcaaaagct cagcaaacc agccccagg 500
 attgacttct cctgggctct acccggcagc caccacagcc aagcagggga 550
 agacaggggc tgaggccctt ccattgccag ggacttcca gtacgggcac 600
 gaaaggactt ctcaatcac aggaacctt cctcaccag cgacctctc 650
 tcctgcaggg agctcccgcc ccccatgca gctggactcc acctcagcag 700
 aggacaccag tccagctctc agcagtggca gctctaagcc cagggtgtcc 750
 atcccgatgg tccgcatact ggccccagtc ctggtgctgc tgagccttct 800
 gtcagccgca ggccctgatc ccttctgcag ccacctgctc ctgtggagaa 850
 aggaagctca acaggccacg gagacacaga ggaacgagaa gttctggctc 900
 tcacgcttga ctgcggagga aaaggaagcc ccttcccagg cccctgaggg 950
 ggacgtgatc tcgatgcctc cctccacac atctgaggag gagctgggct 1000
 tctcgaagtt tgtctcagcg tagggcagga ggccctcctg gccaggccag 1050
 cagtgaagca gtatggctgg ctggatcagc accgattccc gaaagcttct 1100
 cacctcagcc tcagagtcca gtgcccga ctccagggt ctccccacc 1150
 tccccaggct ctctcttgc atgttccagc ctgacctaga agcgtttgtc 1200
 agccctggag cccagagcgg tggccttgct cttccggctg gagactggga 1250
 catccctgat aggttcacat cctggggcag agtaccaggc tgctgacct 1300
 cagcagggcc agacaaggct cagtggatct ggtctgagtt tcaatctgcc 1350
 aggaactcct gggcctcatg cccagtgtcg gaccctgcct tctccact 1400
 ccagaccca ccttgtctc cctccctggc gtcctcagac ttagtccac 1450
 ggtctcctgc atcagctggg gatgaagagg agcatgctgg ggtgagactg 1500
 ggattctggc ttctctttga accacctgca tccagccctt caggaagcct 1550
 gtgaaaaacg tgattcctgg cccaccaag accacacaaa accatctctg 1600
 ggcttggtgc aggactctga attctaaca tgcccagtga ctgtcgcaact 1650
 tgagtttgag ggccagtggg cctgatgaac gtcacaccc cttcagctta 1700

gagtctgcat ttgggctgtg acgtctccac ctgccccaat agatctgctc 1750
tgtctgogac accagatcca cgtggggact cccctgaggc ctgctaagtc 1800
caggccttgg tcaggtcagg tgcacattgc aggataagcc caggaccggc 1850
acagaagtgg ttgcctttnc catttgccct ccctggncca tgccttcttg 1900
cctttggaaa aaatgatgaa gaaaaccttg gctccttcct tgtctggaaa 1950
gggttacttg cctatgggtt ctgggtggcta gagagaaaag tagaaaacca 2000
gagtgcacgt aggtgtctaa cacagaggag agtaggaaca gggcggatac 2050
ctgaaggtga ctccgagtcc agccccctgg agaaggggtc gggggtggtg 2100
gtaaagtagc acaactacta ttttttttct ttttccatta ttattgtttt 2150
ttaagacaga atctcgtgct gctgcccagg ctggagtga gtggcacgat 2200
ctgcaaaactc cgctcctgg gttcaagtga ttcttctgcc tcagcctccc 2250
gagtagctgg gattacaggc acgcaccacc acacctggct aatttttgta 2300
cttttagtag agatgggggtt tcaccatggt ggccaggctg gtcttgaact 2350
cctgacctca aatgagcctc ctgcttcagt ctcccaaatt gccgggatta 2400
caggcatgag ccaactgtgtc tggccctatt tcctttaaaa agtgaaatta 2450
agagttgttc agtatgcaa acttggaag atggaggaga aaaagaaaag 2500
gaagaaaaaa atgtcaccca tagtctcacc agagactatc attatttcgt 2550
tttggtgtac ttcttccac tcttttcttc ttcacataat ttgccggtgt 2600
tctttttaca gagcaattat cttgtatata caactttgta tctgcocttt 2650
tccaccttat cgttccatca ctttattcca gcacttctct gtgttttaca 2700
gaccttttta taaataaaat gttcatcagc tgcataaaaa aaaaaaaaaa 2749

<210> 517
<211> 332
<212> PRT
<213> Homo Sapien

<400> 517
Met Arg Leu Leu Val Leu Leu Trp Gly Cys Leu Leu Leu Pro Gly
1 5 10 15
Tyr Glu Ala Leu Glu Gly Pro Glu Glu Ile Ser Gly Phe Glu Gly
20 25 30
Asp Thr Val Ser Leu Gln Cys Thr Tyr Arg Glu Glu Leu Arg Asp
35 40 45
His Arg Lys Tyr Trp Cys Arg Lys Gly Gly Ile Leu Phe Ser Arg
50 55 60
Cys Ser Gly Thr Ile Tyr Ala Glu Glu Gly Gln Glu Thr Met
65 70 75

ccctgcagtg cacctacagg gaag 24

<210> 519

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 519

ctgtcttccc ctgcttggct gtgg 24

<210> 520

<211> 47

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 520

ggtgcaggaa ggggtgggatc ctcttctctc gctgctctgg ccacatc 47

<210> 521

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 521

ccagtgcaca gcaggcaacg aagc 24

<210> 522

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 522

actaggctgt atgcctgggt gggc 24

<210> 523

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 523

gtatgtacaa agcatcggca tggttgcagg agcagtgaca ggc 43

<210> 524

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 524
aatctcagca ccagccactc agagca 26

<210> 525
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 525
gttaaagagg gtgcccttcc agcga 25

<210> 526
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 526
tatcccaatg cctccccact gctc 24

<210> 527
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 527
gatgaacttg gcgaaggggc ggca 24

<210> 528
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 528
agggaggatt atccttgacc tttgaagacc 30

<210> 529
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 529
gaagcaagtg cccagctc 18

<210> 530
<211> 18
<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 530

cggttcctg ctctttgg 18

<210> 531

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 531

caccgtagct gggagcgac tcac 24

<210> 532

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 532

agtgtaagtc aagctccc 18